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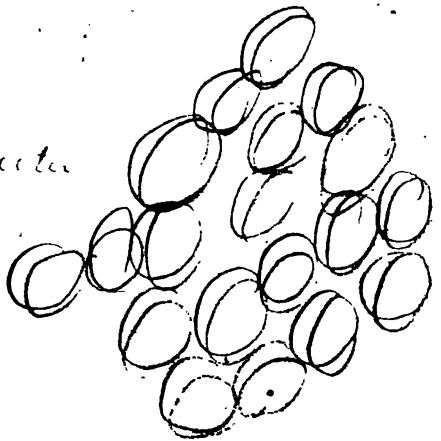
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GUYOT'S GEOGRAPHICAL SERIES.

GUYOT'S .

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[Mass. 20]

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PREFACE.

THE NEW INTERMEDIATE GEOGRAPHY is a book of the same grade as the INTERMEDIATE published in 1867, but of wider scope than it. The latter book was prepared as an *outline* of the subject, with reference to classes of the intermediate grade who are expected to take a higher course in geography in the Grammar Schools; and the great success it at once attained showed that it met a want long felt and generally recognized among teachers.

Since the publication of that work a demand has arisen for a book of the same grade, embodying the same fundamental ideas, which should be sufficiently complete and full to furnish, in a single course, all the geographical knowledge which the great body of pupils in the intermediate grades of our city schools, and Common Schools throughout the country, need, or have the opportunity to acquire.

The NEW INTERMEDIATE is designed to meet this demand. It furnishes a complete, thorough, and symmetrical summary of geographical knowledge, so presented as to be easily understood by pupils in every stage of advancement below the academic grade; so analyzed and classified as to be easily retained and always at command; and provided with such facilities for class drill and review as to meet the wants of the numerous teachers in intermediate grades of school, whose duties are so laborious as to make it almost impossible for them to give special thought to modes of conducting class exercises, or illustrating the subject matter and impressing it upon the memory of their pupils.

Particular prominence is given to that department of geography so important to all, — especially to the business part of the community, most of whose recruits are drawn from the middle grades of the public schools rather than from high schools or universities,—namely, the location, the commercial relations,

and the commercial and industrial importance of civilized countries and populous cities; and the natural channels of trade opened by great rivers, lakes, and inland seas.

The STUDY OF LOCATION is provided for by carefully prepared map studies and exercises in map drawing, as in the INTERMEDIATE GEOGRAPHY.

The thorough STUDY OF COMMERCIAL AND INDUSTRIAL GEOGRAPHY is secured, first, by statements of the productions, exports, and extent of commerce of each country, when that country is under discussion; second, by presenting, at the close of the study of each continent, a classification of its cities according to population, and a brief summary of its commerce, naming its leading commercial countries, the kind of productions it, as a whole, sends into the general channels of trade, the countries from which they are derived, and the ports at which they are shipped.

At the close of the study of the New World is a carefully prepared list of REVIEW QUESTIONS on the part of the book then completed, with references to the pages on which the matter under consideration is presented; and a similar review of the Eastern Hemisphere is placed at the close of the book. In addition to these two partial reviews, there is a general review, in two parts, designed especially as a preparation for examination on political, local, and commercial geography.

With such facilities for thorough and intelligent study, this book is commended to teachers, in the confident expectation that it will be found one of the most valuable volumes, not only in the series to which it belongs, but in the long list of works which during the past decade have done so much to facilitate the arduous labors of the teacher, and to awaken, stimulate, and direct the intellectual activity of the pupil.

ARNOLD GUYOT.

PRINCETON, N. J., June 1, 1875.

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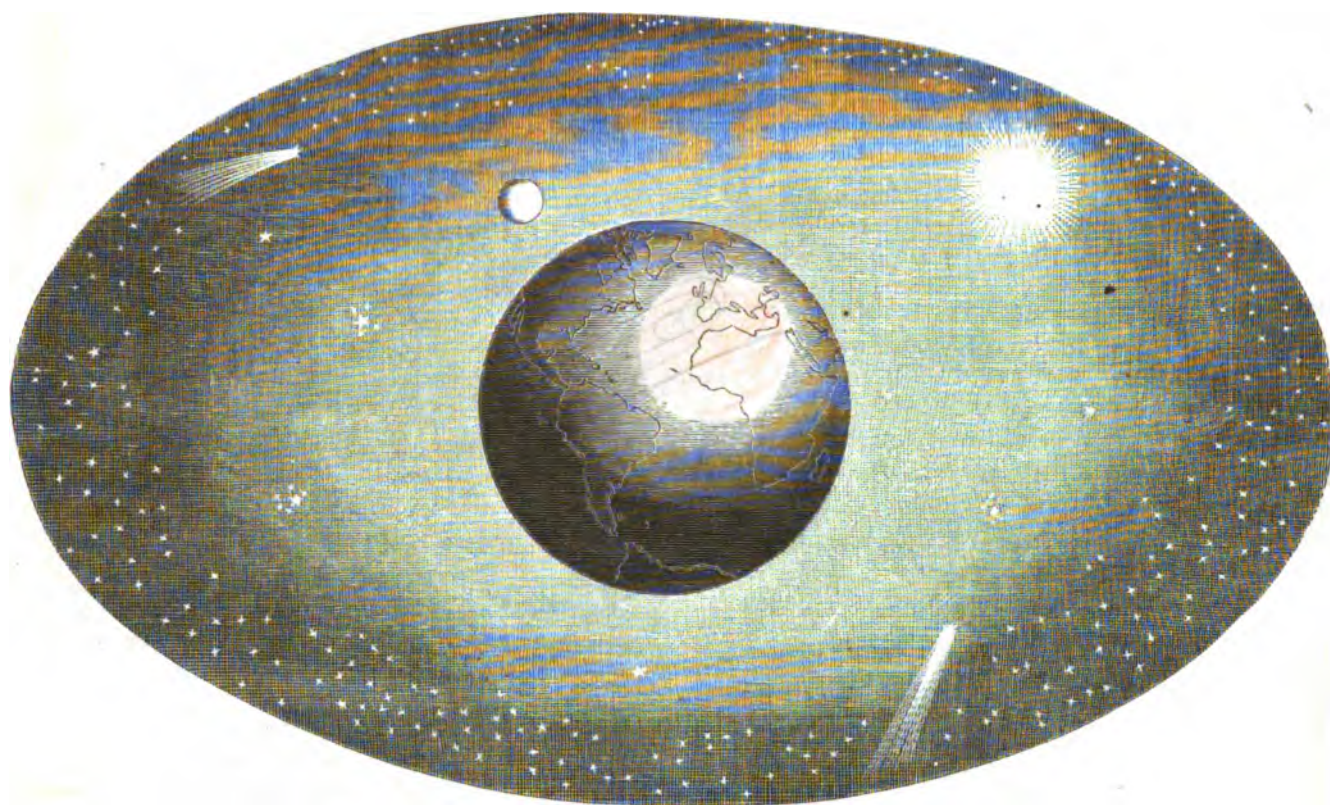
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GEOGRAPHY.



I. THE EARTH.

I. INTRODUCTION.

Geography.—Geography is a description of the earth—of its surface, and the plants, animals, and people living upon it.

The Earth.—The earth is one of a class of bodies called *Planets*, which constantly revolve around the sun, and receive light and heat from it.

Some of the planets, as Venus, Mars, and Jupiter, can be seen in the sky

Questions.—What is Geography? What is the earth? Whence do the planets receive light? Name some of the other planets. What do they look like?

like very large bright stars. The earth seen from them would also look like a star.

Surface of the Earth.—The *surface* of the earth is composed of land and water. It is surrounded by the atmosphere, without which neither animals nor plants could live.

The *land*, the *water*, and the *air*; the *sunlight* falling upon them, and the useful *plants* and *animals*, which are so abundant, are all necessary for the comfort and well-being of man, for whose home the earth was made.

Questions.—What is meant by the surface of the earth? Of what is it composed? By what is it surrounded? What was necessary to fit the earth to be man's home?

II. FORM AND SIZE OF THE EARTH.

Form of the Earth.—The earth is round, like a ball or sphere. It does not appear round to us, because we see so little of its surface at once; but there are many proofs that it is so, among which are the following:—

PROOFS. (1.) People have started from a certain place, and keeping one general direction have finally returned to the place whence they started, thus travelling entirely round the earth.

(2.) The shadow of the earth, seen upon the moon in an eclipse, is always circular. No figure but a globe always casts a circular shadow, whichever side is towards the light.

(3.) When ships approach each other at sea, the top of the masts is all that is seen at first of either from the other. The lower parts are hidden from each other by the curve of the surface between them.

Size of the Earth.—The distance around the earth, called the *circumference*, is nearly 25,000 miles.

The distance through the centre of the earth, from side to side, is called the *diameter*. It is nearly 8,000 miles.

III. MOTIONS OF THE EARTH.

Rotation.—1. **DIRECTION.**—The earth is constantly turning round (rotating) from west to east, bringing every part of its surface in succession towards the sun, so that the sun seems to pass round the earth from east to west.

2. The **TIME** of one rotation is twenty-four hours, called a day. The first appearance of the sun in the *East* is called *sunrise*. Its disappearance in the *West* is called *sunset*.

Day-time is that part of the twenty-four hours during which a place is within the light of the sun; the other part is *night*.

Noon is the middle of the day; *midnight* is the middle of the night.

3. **AXIS.**—The central line around which the earth rotates, is called its *axis*.

4. **POLES.**—The extremities of the axis are called *Poles*. The northern is the North Pole, the southern is the South Pole.

Revolution.—1. **TIME.**—The earth makes one revolution around the sun in 365 $\frac{1}{4}$ days, called a *year*.

2. **ORBIT.**—The path in which the earth moves around the sun is nearly circular, and is called the *Orbit of the Earth*.

3. **PLANE OF THE ORBIT.**—The imaginary plane in which the path of the earth lies, is called the plane of the earth's orbit.

If we imagine the thinnest possible sheet of glass passing through the centre of the sun, and extending out on every side to the orbit of the earth, this will represent to our minds the plane of the earth's orbit.*

Questions.—What is the form of the earth? Why does it not appear round to us? What is the first mentioned proof of its roundness? the second? the third?

What is meant by the circumference of the earth? How great is it? What is meant by the diameter of the earth? How great is it? What two motions has the earth, which affect its relations to the sun? What is the direction of the rotary motion? What is the effect of the daily rotation of the earth from west to east? How long a time is occupied in one rotation? What is meant by sunrise? Sunset? Day-time? Night-time? What is the centre around which the earth rotates called? What are the extremities of the axis called? How long is the earth in making one revolution around the sun? What is its path around the sun called? What is meant by the plane of the earth's orbit? How can we represent it to our minds?

* Teachers will find the explanation of the change of seasons,—caused by the inclination of the earth's axis to the plane of its orbit,—on page 7, under climate.

IV. REPRESENTATIONS OF THE EARTH.

Modes of Representation.—For purposes of study globes and maps are used to represent the surface of the earth to the eye.

Globes.—1. A **GLOBE** is a representation of the entire earth by means of a ball, upon the surface of which are drawings representing the great bodies of land and water.



2. **HEMISPHERES.**—The half of a globe is called a *hemisphere*.

If the globe be divided, and the two hemispheres placed side by side, with the curved faces towards the eye, the entire surface may be observed at once.

The globe is divided, midway between the poles, into a Northern and a Southern Hemisphere; and through the Atlantic and Pacific

Oceans, into an Eastern and a Western Hemisphere.

The division into Eastern and Western Hemispheres is made by a circle passing a little to the west of the Canary Islands. This leaves all the land known before the discovery of America in the Eastern Hemisphere, and the "New World" in the Western.

Maps.—1. A **MAP** is a representation of the whole or any part of the earth's surface on a plane or flat surface.

Maps are usually so drawn that north is at the top, south at the bottom, east at the right hand, and west at the left.

2. **MAP OF THE WORLD.**—A map of the entire surface of the earth is called a *Map of the World*. Such maps are commonly made by representing the hemispheres within two circles, placed side by side.

V. GEOGRAPHICAL CIRCLES.

Circles, great and small.—For convenience in fixing the location of places on the globe, its surface is divided into parts by circles, some extending east and west, others north and south.

All circles which divide the globe into hemispheres are called *great circles*; all others are *small circles*.

Questions.—What is a globe? What is a hemisphere? How can the entire surface of the globe be observed at once? Where is the division between the Eastern and Western Hemispheres usually made? Why? What is a map? What part of the map represents the north? The other directions? What is a map of the world? How are maps of the world commonly made? What is the purpose of the circles of the globe? What is meant by a great circle? What are small circles?

Every circle, whether great or small, is considered as divided into 360 equal parts, called degrees, and marked thus: 360° .

One-sixtieth part of a degree is called a minute, and marked thus: 1'.

One-sixtieth part of a minute is called a second, and marked thus: 1".

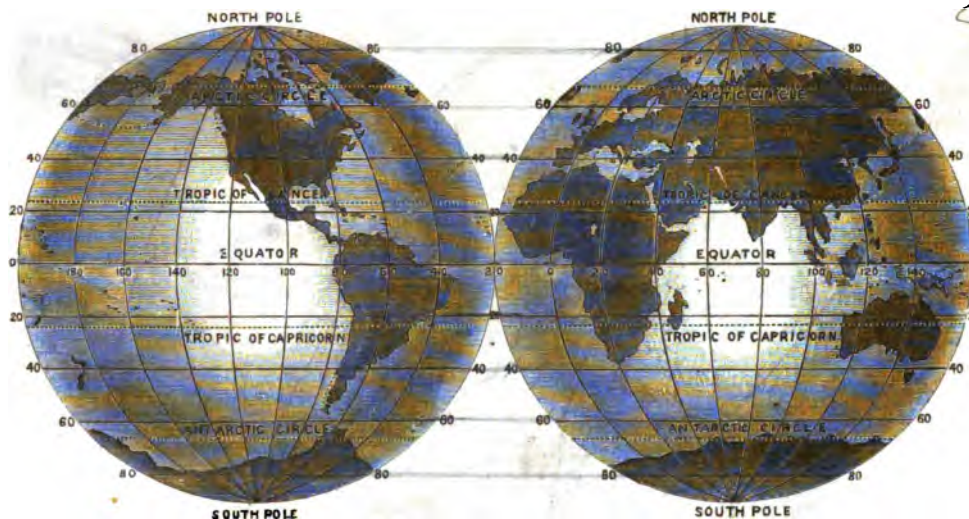
The Equator.—The great circle extending east and west, midway between the poles, is called the *Equator*.

Meridians.—The circles extending north and south are great circles, and all meet at the poles. The half-circles extending from pole to pole are called *Meridians*.

This name means *mid-day*, and the meridians are so called because all places on the same meridian have mid-day at the same moment.

Parallels.—The small circles extending east and west, between the Equator and the poles, are called *Parallels*.

Two parallels, situated $23\frac{1}{2}^{\circ}$ from the Equator, are called *Tropics*. The northern is the *Tropic of Cancer*; the southern, the *Tropic of Capricorn*.



A MAP OF THE WORLD, SHOWING THE GEOGRAPHICAL CIRCLES.

Two parallels, situated $23\frac{1}{2}^{\circ}$ from the poles, are called the *Polar Circles*. The northern is named the *Arctic Circle*; the southern, the *Antarctic Circle*.

VI. GEOGRAPHICAL POSITION.

How stated.—In stating the exact position of a place on the globe, we give,—in degrees, minutes, and seconds,—first, its distance north or south of the Equator; second, its distance east or west of some meridian, which is chosen as a starting-place, and called the Prime (first) Meridian.

The prime meridian commonly employed passes through the great observatory at Greenwich, near London.

Questions.—How are circles divided? What is a degree? A minute? A second? What is the Equator? What are the meridians? Where do all meridians meet? Why are the meridians so called? What are the parallels? What are the Tropics? Name each. What are the Polar Circles? Name each.

How do we describe the exact position of a place on the globe? What meridian is commonly used as the prime meridian?

Latitude.—Distance from the Equator is called *latitude*.

Latitude is reckoned from the Equator to each pole; that is, one-fourth of the distance round the earth.

Hence there are 90° of north latitude, and 90° of south latitude. The length of a degree of latitude is $69\frac{1}{4}$ miles.

Longitude.—Distance from the prime meridian is called *longitude*.

Longitude is reckoned from the prime meridian, both eastward and westward, half-way round the globe. Hence there are 180° of east longitude and 180° of west longitude.

The length of a degree of longitude at the Equator is $69\frac{1}{4}$ miles, but the degrees diminish constantly towards the poles where the meridians meet.

All places on the same parallel are in the same latitude. All places on the same meridian are in the same longitude. Their latitude and longitude are shown by figures set against the parallels and meridians in the margin of the map, or along the Equator.

VII. THE LANDS OF THE EARTH.

Extent.—The land forms only about one-fourth of the surface of the earth. The remainder, being covered with water, forms the *Sea*.

Continents.—The great bodies of land upon the surface of the earth are called *continents*.

There are six continents, namely: North America, South

Questions.—What is distance from the Equator called? How is latitude reckoned? How many degrees of latitude are there? How long is a degree of latitude?

What is longitude? How is longitude reckoned? How many degrees of longitude are there? How long is a degree of longitude at the Equator? How do the degrees of longitude vary in length?

Why are the degrees of latitude equal everywhere? *Ans.* Because each is $\frac{1}{360}$ th part of a great circle, and all great circles of the globe are equal.

Why do the degrees of longitude vary in length? *Ans.* Because each is $\frac{1}{360}$ th part of a parallel of latitude, and the parallels diminish in circumference from the Equator to the poles.

What is the extent of land upon the surface of the earth? What is the remainder of its surface? What are the great bodies of land called? How many continents are there? What are their names?

America, Europe, Asia, Africa, and Australia. Asia is the largest, and is about five and a half times the size of Australia, which is the smallest.

Islands.—An *island* is a small body of land surrounded by water. Islands are found not only in the sea but also in lakes and rivers within the continents.

Borneo, the largest of the islands, is only about one-tenth of the size of the smallest continent.

A large cluster of islands is called an *archipelago*.

Coast Lands.—The part of a continent or island which borders upon the water is called the *coast* or *shore*.

A *peninsula* is a portion of land nearly surrounded by water; as the peninsula of Florida, and Alaska peninsula.

A *cape* is a point of land projecting into the water; as Cape Cod, Cape Mendocino. A high *cape* is often called a *promontory*.

An *isthmus* is a narrow neck of land connecting two bodies of land; as the Isthmus of Panama, connecting North and South America.

VIII. THE SEA.

The Sea.—The *Sea* is the name given to the vast waters which cover nearly three-fourths of the surface of the earth.

Great Oceans.—The parts into which the continents divide the sea, are called *oceans*. There are three great oceans, namely: the Pacific, the Atlantic, and the Indian Oceans.

The Pacific Ocean is the largest. It lies east of the Old World and west of the New, and is nearly oval in form.

The Atlantic Ocean is the second in size. It lies east of the New World and west of the Old, and has a narrow, bending form.

The Indian Ocean is the smallest of the three great oceans.

Questions.—Which continent is the largest? Which is the smallest? How do these two compare in size? What are the smaller bodies of land called? Where are islands found? Which is the largest of the islands? How does it compare in size with the smallest continent?

What is an archipelago? What is the shore or coast? What is a peninsula? A cape? A promontory? An isthmus? What is the sea? What are the oceans? Which are the great oceans? Describe the Pacific; the Atlantic; the Indian Ocean.

It lies between the two southern continents of the Old World, and is somewhat triangular in form.

Lesser Oceans.—There are two smaller divisions of the sea which are also called oceans. They are the Arctic, and the Antarctic Ocean.

The Arctic Ocean is the part of the sea which lies around the North Pole. It is surrounded by the three Northern continents, and is nearly circular in form.

The Antarctic Ocean is that part of the sea which lies about the South Pole. It is not surrounded by any lands, but is the centre from which the three great oceans proceed northward.

The three great oceans form vast highways, affording easy communication between the countries on their borders all over the globe.

The lesser oceans, being encumbered by ice, are of little use except as fishing grounds for the *whale* and *seal*.



COAST LANDS AND WATERS.

Coast Waters.—1. **INLAND SEA.**—A part of the ocean lying within the body of the continent, is called an *inland sea*. Such are the Gulf of Mexico, Hudson Bay, and the Baltic Sea.

2. **BORDER SEA.**—A part of the ocean bordering upon the continent, and separated from the main ocean by islands, is called a *border sea*. The Caribbean and Japan Seas are of this class.

3. A **GULF** or **BAY** is a body of water lying within a bend of the coast line; as the *Gulf of Guinea*; the *Bay of Biscay*. The basin of a gulf or bay is not separated from the ocean basin of which it is a part.

A small bay nearly inclosed by land, so as to be safe for vessels in time of storms, is called a *harbor*.

River mouths, when broad and deep, form harbors. *New York Harbor*, of which the mouth of the Hudson River forms a part, is one of the finest in the world.

4. **STRAIT.**—A narrow passage of water, connecting two bodies of water, is called a *strait* or *chunnel*; as the Strait of Gibraltar connecting the Mediterranean Sea with the Atlantic Ocean.

Questions.—Which are the lesser oceans? Where does the Arctic Ocean lie, and what is its form? Describe the Antarctic Ocean? What are some of the uses of the oceans?

What is an inland sea? A border sea? What is a gulf or bay? Name an inland sea.

Name a border sea. A gulf or bay. What is a harbor? Name one. What is a strait? Name one.

5. **SOUND.**—A passage or body of water which has but a slight depth, is called a *sound*; as Long Island Sound.

IX. THE SURFACE OF THE LAND.

Variation.—The surface of the land is very uneven, some portions being much higher than others, while the surface of the sea is level.

The level surface of the sea is the uniform base from which the height of the land is measured.

The higher lands are called *mountains*, *hills*, or *plateaux*. The lower lands are called *valleys* or *plains*.

A **Plain** is a broad extent of land not far above the level of the sea. Some plains are nearly level, others have an uneven surface or are crossed by ridges of low hills.

Plains which are always very wet or partly covered with shallow water, are called *swamps* or *marshes*.

Plains which are so dry that little or nothing can grow upon them, are called *deserts*. A fertile spot within a desert is called an *oasis*.

A **Valley** is a narrow portion of low land between higher lands.

A **Plateau** is a broad extent of land much elevated above the level of the sea. Plateaux are also called table-lands.

Mountains Hills.—A *mountain range* is a long and somewhat narrow ridge of land rising far above the level of the sea. Elevations rising but little above the surrounding country are usually called *hills*.

The parts of a mountain range which rise above its general level are called *peaks*, *mounts*, or *mountains*. The depressions are called *passes*.

The highest part of a mountain or hill is called the *summit*; the lowest part, the *base*; and the space between summit and base, the *slope*.

A *volcano* is a cone-shaped mountain, formed of substances thrown out from within the earth, through an opening called the *crater*.

X. INLAND WATERS.

Circulation of the Water.—1. **WATERY VAPOR** is constantly rising from the surface of the sea, and is carried by the winds to the lands.

Questions.—What is a sound? Name one. How does the surface of the land differ from that of the sea? From what is the height of the land measured? What are the higher lands called? The lower lands?

What is a plain? What kind of surface have plains? What is a swamp? A desert? An oasis?

What is a valley? What is a plateau? A mountain range? What elevations are called hills? What are the higher parts of a mountain range called? The lower parts? What is meant by the summit of a mountain? The base? The slope? In what form does water rise from the sea? How is it carried to the land?

2. **RAIN and SNOW.**—When there is a large quantity of vapor in the air, it gathers into clouds and falls, commonly in *rain* or *snow*.

3. **SPRINGS, STREAMS, and LAKES.**—A part of the rain-water which falls upon the land, sinks deep into the ground and winds about among the rocks, until it finds its way to the surface in some lower ground. This forms a *spring*.

The little brooks which flow from springs unite and form *streams*; and the brooks and rivers, carrying water into natural hollows in the surface of the land, fill them and form *lakes*.

The water from the springs, streams, and lakes is constantly flowing away down the slopes of the land; and a large part of it finally reaches the sea, from which it rises again in vapor, and starts anew on its journey to the continents. Springs, streams, and lakes are called *inland waters*.

Rivers.—1. A **RIVER** is a large stream of water, formed by the confluence of smaller streams.

2. **SOURCE and MOUTH.**—The place where a river begins is called the *source*; the place where it ends is the *mouth*. Towards the source is called *up* the river; towards the mouth, *down*.

3. **TRIBUTARY.**—The streams which flow into a river are called its *tributaries*.

4. **RIVER SYSTEM.**—A great river and all its tributaries taken together form a river system.

5. **LAND CONNECTED WITH RIVERS.**—The *bank* of a river is the land bordering upon it.

The bank on the right hand, when facing down stream, is called the *right bank*; the other, the *left bank*.

The *bed* of a river is the land beneath the water.

The entire tract of country drained by a river and all its tributaries taken together, is called the *basin* of the river. The higher land, which separates adjacent river basins, is called the *water-shed*.

Sometimes the water-shed is a range of mountains,—as the Rocky Mountains, between the Missouri and Columbia River basins. Sometimes it is only a slight swell of land, so little above the general level as hardly to be noticed when travelling over the country.

Rivers always flow away from the higher parts of the country, down the slope towards the lower parts; as the water on the roof of a house flows from the centre, which is higher, towards the edges, which are lower.

Hence by noticing the direction in which the streams flow, we can always learn in what direction the land slopes.

Questions.—In what form does water fall to the ground? What becomes of the rain-water which sinks into the earth? What is a spring? What do the little brooks from the springs together form? How do streams form lakes? What finally becomes of the larger part of the water which flows upon the surface of the land? What are springs, lakes, and streams together called? What is a river? What is the source of a river? The mouth? How are directions on a river distinguished? What is a tributary river? What is a river system? What are the banks of a river? How are they distinguished one from the other? What is the river bed? A river basin? A water-shed? How do water-sheds differ? In what direction do rivers always flow? How may we learn from rivers the direction in which the land slopes?



VARIATIONS OF LAND SURFACE.

The borders of a river basin, where are found the sources of the river and its tributaries, are higher than the middle part in which the main stream lies.

6. USES OF RIVERS.—Rivers, upon which boats laden with passengers or freight can sail, are said to be *navigable*.

Rivers whose waters can be employed in turning the machinery of mills and manufactories, are said to afford *water-power*.

Shallow and rapid streams, and streams which have frequent falls, are generally not navigable; but are often very valuable for their water-power.

Lakes.—A lake is a body of water, lying in a hollow or basin in the land. The water usually enters the basin by several streams but flows out by only one.

Some lakes have no outlets. These are usually salt, and some of them are called *seas*; as Caspian Sea, Aral Sea.

That part of a lake at which the water flows out of it, is called the *foot*; the opposite end is the *head*.

ceive most heat from the sun, and the temperature gradually diminishes towards the poles, where least heat is received.

2. EFFECT OF ELEVATION.—In all latitudes the temperature diminishes as the elevation increases. Very high mountains, even under the Equator, have their summits covered at all times with snow and ice.

3. EFFECT OF SEA WINDS.—Wind from the sea not only bears moisture over the lands, but warms them in winter and cools them in summer. Therefore places near the sea have cooler summers and warmer winters than places far inland in the same latitude.

Zones.—The earth's surface is divided into parts called *zones*, corresponding to the gradual decrease of temperature from the Equator to the poles.

A ZONE is a broad belt of the earth's surface throughout which the temperature is nearly the same.



MAP OF THE WORLD, SHOWING THE LIMITS OF THE ZONES.

Towards the head is called *up* the lake, towards the foot *down* the lake.

The *shore* of a lake is the land bordering upon it.

Along the shore of a large lake, as along the sea-coast, there are bays, harbors, capes, and peninsulas; and often islands rise from its surface.

XI. CLIMATE.

Definition.—The climate of a place signifies its general condition in regard to temperature, moisture, and healthfulness, the prevailing winds and the character of the seasons.

Variations of Temperature.—1. EFFECT OF LATITUDE.—The portions of the earth's surface nearest the Equator re-

Questions.—How do the borders of a river basin compare in elevation with the central part? When is a river said to be navigable? When is a river said to afford water-power? What streams are generally not navigable?

What is a lake? How is the water brought into a lake? How carried out? What is the character of lakes which have no outlet? What is the foot of a lake? The head? The shore?

What forms of land and of water are found along the shores of large lakes? What is meant by climate? How does the temperature vary on different parts of the earth's surface?

There are five zones—one, **TORRID**, extending from the Tropic of Cancer to the Tropic of Capricorn; two **TEMPERATE**, which extend from the tropics to the polar circles; and one **FRIGID**, extending from the polar circles to the poles.

Character of Zones.—1. The **TORRID ZONE** has great heat throughout the year, the sun being always nearly overhead at noon. The wind blows always from the eastward. The year is divided into a *dry season*, in which no rain falls, and a *wet season*, in which there is heavy rain almost every day.

2. The **FRIGID ZONES** have extremely cold weather nearly all the year. There is a short summer, lasting from four to six weeks; but even then the ground thaws only a few feet below the surface, and great masses of floating ice fill the sea.

In winter the air is dry and the sky clear, but in summer fogs, clouds, and drizzling rain prevail.

Questions.—What is the effect of elevation on temperature? What would you find at the top of all very high mountains? How do the sea-winds affect the temperature of the lands? How do places on the sea-shore differ in climate from those far inland? How is the earth's surface divided on account of the variation of temperature between the Equator and the poles? What are zones? How many zones are there? What are their names? Where are they severally situated? What is the temperature of the Torrid Zone? What is the direction of the wind? What are the seasons of the Torrid Zone? What is the temperature of the Frigid Zone? How do the sky and air differ in winter and summer?

During the colder half of the year the days are very short, and there is a period, varying from one day at the polar circles to six months at the poles, during which the sun does not rise at all, but there is continuous night. During the warmer half the days are very long, and there is a period of continuous day, varying in length like that of continuous night.

3. The TEMPERATE ZONES are neither very hot nor excessively cold. They have four seasons, spring, summer, autumn, and winter.

The wind blows from all points of the compass, but mainly from a southerly and a northerly direction; and rain or snow falls in all parts of the year.

In winter the nights are longer than the days, and in summer the days are longer than the nights.

XII. CHANGE OF SEASONS.

NOTE.—THE TEACHER may, at discretion, defer this lesson until a later period, and take it up in connection with the review.

Position of the Earth's Axis.—The axis of the earth is inclined $23\frac{1}{2}^{\circ}$ towards the plane of the orbit, and its position is unvarying, the North Pole being directed always towards the North Star.

Effects.—The inclination and fixed position of the earth's axis, during the annual revolution around the sun, cause the variation in the length of day and night, and in the temperature of the different seasons of the year.

EXPLANATION.—On the 20th of March, the earth is so situated in its orbit that the sun is vertical or directly overhead, at the Equator. Its light, since it extends over half the earth's surface, reaches 90° on each side of the Equator, or to each pole.

Questions.—What is peculiar about the length of the winter days? Of the summer days? What is the temperature of the Temperate Zones?

How many seasons have they? From what directions does the wind blow?

When does rain fall? How do the days and nights compare in length in winter? How in summer?

What is the degree of inclination of the earth's axis? In what direction does it at all times point?

What causes the change of seasons and the variation in the length of day and night?

On what part of the earth's surface is the sun vertical on the 20th of March? How far on each side of the Equator does its light reach?

(Why just to each pole?) What season then has the Northern Hemisphere? The Southern?

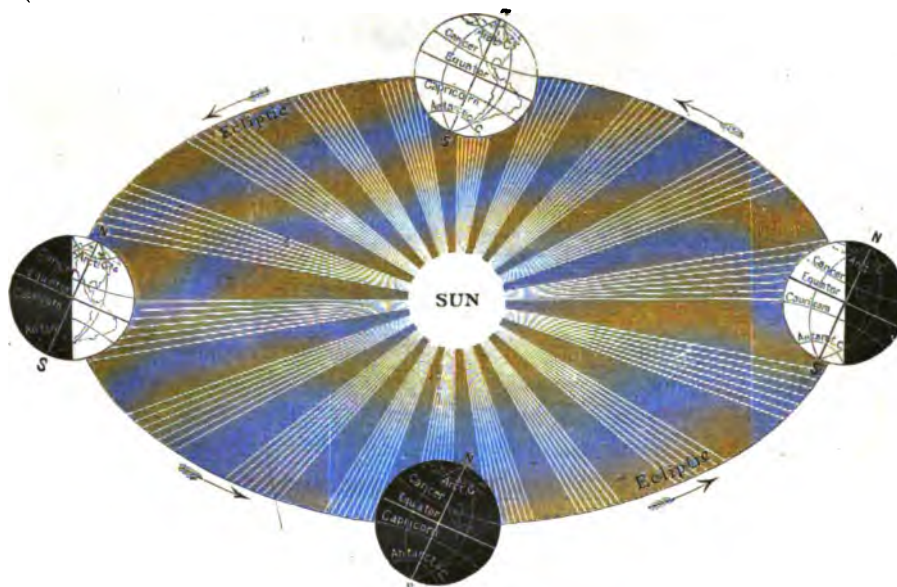
and the two hemispheres, northern and southern, receive the same amount of heat. (It is then *Spring* in the Northern Hemisphere, and *Autumn* in the Southern.)

On the 21st of June, when the earth has made one-quarter of its revolution, the sun is vertical $23\frac{1}{2}^{\circ}$ north of the Equator (because the axis of the earth is inclined $23\frac{1}{2}^{\circ}$, and the North Pole is towards the sun). The light, reaching 90° on each side of the place at which the sun is vertical, extends $23\frac{1}{2}^{\circ}$ beyond the North Pole, but falls $23\frac{1}{2}^{\circ}$ short of the South Pole. The Northern Hemisphere then receives much more heat than the Southern, and has *Summer*, while the Southern has *Winter*.

On the 23d of September the earth has made one-half of its revolution; and the sun is again vertical at the Equator. The Northern Hemisphere then has *Autumn*, and the Southern has *Spring*.

On the 22d of December, after three-quarters of a revolution, the sun is vertical $23\frac{1}{2}^{\circ}$ south of the Equator. The light reaches $23\frac{1}{2}^{\circ}$ beyond the South Pole, but falls $23\frac{1}{2}^{\circ}$ short of the North Pole. The Southern Hemisphere then has *Summer*, and the Northern has *Winter*.

If the earth's axis were perpendicular to the plane of its orbit, the sun would, in all parts of the year, be vertical at the Equator, and the light and heat would be distributed upon the earth at all times as they now are on the 20th of March and the 23d of September.



CHANGE OF SEASONS.

Length of Day and Night.

When the sun is vertical at the Equator, its light, reaching from pole to pole, extends over just half of each parallel of latitude.

Every place on the earth is, therefore, in light during but half of the time of a rotation.

Thus the day and the night are each twelve hours long.

From March to September, in the Northern Hemisphere, the days are longer than the nights; but in the Southern, the nights are longer than the

days. From September to March the reverse is true.

Questions.—Where is the sun vertical on the 21st of June? Why $23\frac{1}{2}^{\circ}$ degrees from the Equator? How far on each side of the Equator does its light then reach? What season, then, has the Northern Hemisphere? What season the Southern? Where is the sun vertical on the 23d of September? How is the light then shed upon the earth? What season has the Northern Hemisphere then? The Southern? Where is the sun vertical on the 22d of December? How far on each side of the Equator does the light reach? What are the seasons in the opposite hemispheres at that time? What would be the result, in regard to change of seasons, if the earth's axis were perpendicular to the plane of its orbit? How much of every parallel of latitude does the sun's light cover when it is vertical at the Equator? How do the days and nights then compare in length all over the globe? When are the days longer than the nights in the Northern Hemisphere? When in the Southern? Why is this?

When the sun is vertical north of the Equator its light extends over more than half of each northern parallel, but less than half of each southern parallel.

Every place north of the Equator is therefore in light more than half the time of a rotation, and the day is longer than the night; while every place south of the Equator has light less than half the time of a rotation, and the day is shorter than the night.

When the sun is vertical south of the Equator, the day in the Southern Hemisphere is longer than the night; while in the Northern Hemisphere it is shorter.

Limit of Zones.—The sun is vertical during some part of the year at every parallel between $23\frac{1}{2}^{\circ}$ north latitude and $23\frac{1}{2}^{\circ}$ south latitude, but is never vertical beyond this latitude.

The Tropics mark the points farthest from the Equator at which the sun is vertical. They are therefore considered the boundaries of the Torrid Zone, although the region just beyond the Tropics is nearly as warm as that between them.

The Polar Circles, which are $23\frac{1}{2}^{\circ}$ from the poles, mark the farthest points to which the sun's light reaches when it is vertical at the tropics.

When the sun is vertical at either tropic, all places within the polar circle of the opposite hemisphere are in darkness during the whole rotation of the earth. The parts nearest the poles are in darkness as long as the sun is on the opposite side of the Equator.

As no part of the Earth's surface beyond these circles is deprived of the sun for twenty-four hours in succession, the Polar circles are regarded as the boundaries of the Frigid Zone.

XIII. VEGETATION AND ANIMALS.

Vegetation.—The plants of a country, including its trees, shrubs, grasses, and flowers, are called its vegetation.

The growth of plants depends upon heat and moisture, therefore, a very cold or dry region has little vegetation.

Questions.—What is the only part of the earth's surface on which the sun is ever vertical? Why are the tropics considered the boundaries of the Torrid Zone? What do the polar circles mark? Why are they considered the true boundaries of the Frigid Zone? What are the plants of a country together called?

Tropical Vegetation.—The Torrid Zone has the greatest degree of heat and abundance of moisture; and, hence, produces the most luxuriant vegetation.

In this zone the growth of plants is not interrupted by frost or snow, but they are constantly covered with foliage, and many of them bear blossoms and fruits throughout the year.

Among the plants peculiar to tropical countries, are the palm, bread-fruit, banana, and coffee tree; the sugar-cane, arum, manioc, and many other plants whose fruits or roots are suitable for the food of man.

Vegetation of the Temperate Zone.—As distance from the Equator increases and the degree of heat diminishes, vegetation gradually becomes less abundant, is less luxuriant in growth, and does not generally bear its foliage throughout the year.

Among the trees of this zone are the oak, maple, elm, beech, and chestnut; and the apple, pear, peach, and many other fruit trees. Wheat, corn, and other grains, potatoes, turnips, and many other useful plants, belong to the Temperate Zone.

Vegetation of the Frigid Zone.—The cold of this zone permits but little vegetation. The principal plants are lichens, mosses, and shrubs of stunted growth. A few kinds of berries are almost the only vegetable food produced in this zone.

Upon mountains, as the heat decreases with elevation, the vegetation changes. High mountains in the Torrid Zone have palms and other tropical plants on the lower slopes; the plants of the Temperate Zone on the middle slopes; and the plants of the Frigid Zone near the snow-covered summits.

Animals.—The largest and most powerful land animals, as the elephant, rhinoceros, lion and tiger, belong to the Torrid Zone. The animals most useful to man,—as the horse, ox, sheep, goat and camel,—are natives of the Temperate Zone.

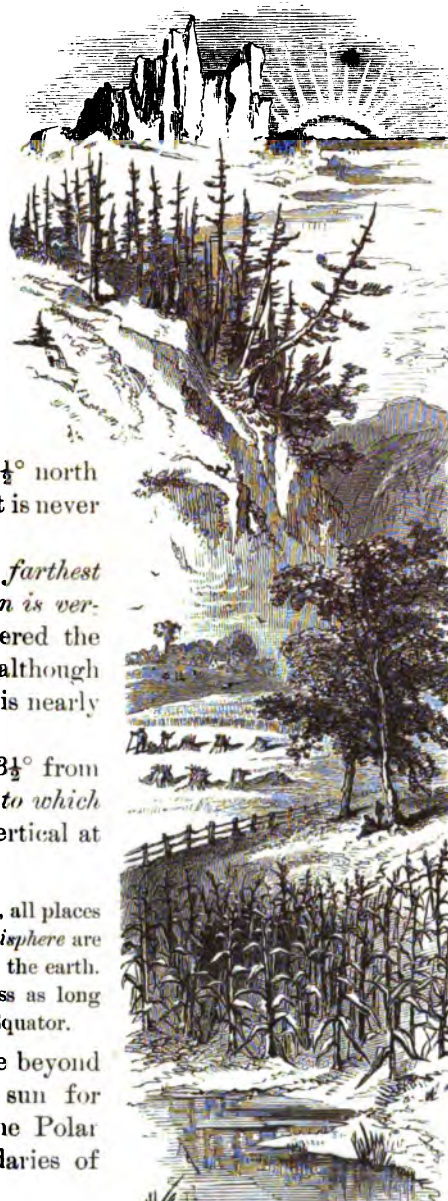
The largest marine animals,—as the whale and walrus,—belong mostly to the Frigid Zone.

XIV. THE HUMAN FAMILY.

Man is found in all climates, adapting himself to the circumstances which surround him; but the different portions of the human family show great differences in their physical features, as well as in their modes of life and the amount of culture and refinement they possess.

The classes into which mankind are divided on account of differ-

Questions.—What is necessary to the growth of plants? Which zone has the most luxuriant vegetation? Why? (Name some of the productions of the Torrid Zone.) How does the vegetation change in passing from tropical regions towards the poles? (Name some of the plants which belong to the Temperate Zones.) What is the character of the plants found in the Frigid Zones? Why is this? How does vegetation vary on a high mountain? What animals are characteristic of each zone? How extensively is the human family spread over the earth?



FRIGID ZONE.

TEMPERATE ZONE.



TORRID ZONE.

ences in the color of the skin, shape and size of the head, form of the features, and other peculiarities of body, are called *Races*.

The Primary Races.—THERE ARE THREE PRIMARY RACES: the *white*, the *yellow*, and the *black*.

1. The *WHITE* race includes the different nations of Europe, and their descendants in all parts of the world; together with the inhabitants of Northern Africa and Western Asia, and the Hindoos of India. The white people of the New World are descended from Europeans.

2. The *YELLOW* or *MONGOLIC* race includes Mongols, the Chinese, Japanese, and other nations of Middle and Eastern Asia.

3. The *AFRICAN* or *NEGRO* race includes the natives of Middle and Southern Africa, and their descendants in all parts of the world. There are many negroes in the United States, Central America, the West Indies, and South America.

Secondary Races.—THERE ARE THREE SECONDARY RACES: a *red* race, called *Indians*, who are the native people of the New World; a *brown* race, who inhabit the Malay Peninsula and the Islands of the Pacific; and a secondary *black* race, inhabiting Australia.

The *Indians* and *Malays* differ but little from the Mongolic race, and are supposed to be branches of it. The *Australians* have straight or frizzled hair, unlike the *Africans*, but are supposed to be a branch of the African race.

XV. STATES OF SOCIETY

The inhabitants of the earth are classed according to their modes of life, as savages, nomads or wanderers, and civilized people.

Questions.—In what respects do different parts of the human family differ? What is meant by races of men? How many and what are the primary races?

What peoples are included in the white race? In the yellow race? In the negro race? How many and what are the secondary races? Which of the main races do the *Indians* and *Malays* resemble? Which the *Australians*? How are the people of the earth classified on account of differences in their modes of life?

Savages live in rude huts and obtain the materials for their food and clothing mainly from wild animals, fish, and the productions of the forest.

The *American Indians*, *African Negroes*, and the *Australians*, are mostly in a savage state.

Nomads, or wandering people, live in tents. They raise flocks and herds, from which they chiefly supply their wants; and, on account of the barrenness of the countries they inhabit, they are obliged to wander from place to place in search of pasture.

The nomads are principally of the white and Mongolic races. Most of the inhabitants of the Sahara, of Arabia, Afghanistan, Beloochistan, Turkestan, and Mongolia are of this class.

The savage and nomadic races are divided into *tribes*, the *chief*, or head man of the tribe, having complete control over the life and property of every person belonging to it. His will is the only law of his people.

Civilized People supply their wants by means of agriculture, manufacturing, commerce, and other occupations; they build cities, support schools, gather themselves into *nations*, and adopt systems of laws for their government.

This class includes the nations of Europe and the New World; the people in the fertile portions of Western Asia and Northern Africa, and those of India, China, and Japan. The European and American nations, in general, are much more highly civilized than those of Asia and Africa.

XVI. OCCUPATIONS OF CIVILIZED LIFE.

The **Materials** for the food and clothing of civilized man are obtained, principally,

Questions.—How do savages live? What peoples are mostly savages? How do the nomadic people live? To what races do they belong? What countries are inhabited by nomads? How are savages and nomads governed? What is the manner of life of civilized people? What nations are included in this class? Which of these are most highly civilized? From what are the materials for the food and clothing of civilized man chiefly obtained?



AFRICAN.

WHITE (ARMENIAN).
THE PRIMARY RACES.

MONGOLIC.



AMERICAN.

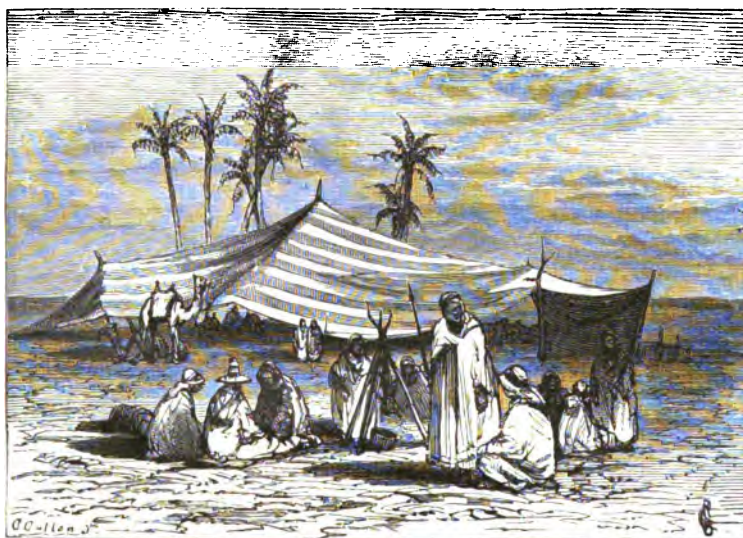


MALAY.



AUSTRALIAN.

THE SECONDARY RACES.



A NOMADIC ENCAMPMENT.

from cultivated plants and domestic animals. His shelter is made of lumber from the forests, or of mineral substances from the earth itself.

Stone; iron; clay, from which brick is made; and sand, from which glass is in part made, are mineral substances.

Four Occupations, agriculture, grazing, lumbering, and mining, procure the raw materials required. Manufacturing prepares them for use.

1. AGRICULTURE is the cultivation of the soil for the purpose of raising useful plants.

2. GRAZING is the rearing of domestic animals.

3. LUMBERING is the cutting of forest trees into logs, and transporting them to mills for the manufacture of lumber.

4. MINING is the procuring of valuable minerals from the earth; except getting out stone, which is called quarrying.

5. MANUFACTURING is the making of articles from materials of any sort, either by hand or by machinery.

The articles made are called manufactures.

Places suited to different Occupations.—1. AGRICULTURE.

—The best land for agriculture is that which is comparatively level, has a fertile soil, and is well supplied with moisture.

Such land is easily cultivated, and plants grow well upon the fertile soil.

2. GRAZING.—Very rough or quite dry land, which is not fit for agriculture, can be used for grazing. Grazing, also, is usually connected with agriculture in the level lands.

Grass and herbage upon which the animals feed will grow where cultivated plants will not succeed; and animals can graze on steep hills and among rocks, where the soil could not well be cultivated nor crops gathered.

3. LUMBERING.—In thickly-settled countries forests are not extensive enough to make lumbering an important business.

The mountainous regions, which cannot be made useful for agriculture, are often covered with forests, from which valuable lumber can be obtained.

4. MINING.—Mines are most easily discovered and worked in mountainous land.

Questions.—From what is shelter made in civilized countries? What four occupations furnish the larger part of the materials used for food, clothing, and shelter? What other occupation is necessary to prepare many of them for use? What is Agriculture? Grazing? Lumbering? Mining? Quarrying? Manufacturing? What is the best land for agriculture? Why? What occupation is more profitable than agriculture upon the rougher and poorer lands? Why? To what regions is lumbering mainly confined in populous countries? What regions are best fitted for mining?

In a mountainous region the rocks in which the valuable minerals are imbedded lie near the surface, and are broken so that the different layers can be examined and the minerals found; while in level lands they may lie at a great depth, hidden beneath other rocks and the soil.

5. MANUFACTURING.—Water-power is much used in turning machinery for manufacturing. Streams flowing through a hilly or mountainous surface afford more water-power than those of level regions. The rough portions of a country are, therefore, well fitted for manufacturing.

XVII. GOVERNMENT.

The Government of a country signifies the power or authority by which that country is ruled.

Among civilized nations there are two principal forms of government, namely: *Republican* and *Monarchical*. The former exists in nearly all the nations of the New World; the latter in nearly all of the Old World.

A Republican government is one in which the supreme power is exercised by representatives of the people, in accordance with a constitution which is the fundamental law of the land.

The United States is a Republic, composed of States the governments of which are also republican.

A Monarchy is a government in which the supreme power is in the hands of one ruler, or Sovereign. The Sovereign usually inherits his office, holds it

during life, and at his death is succeeded by some member of his family, his oldest son having the first right to the throne.

The SOVEREIGN of a country is usually called the Emperor, King, Prince, or Duke; and the country is called an Empire, Kingdom, Principality, or Duchy.

The Emperor of Russia is also called the *Czar* (pronounced Tzar); and the Sovereign of the Turkish Empire is called the *Sultan* (sül'tan).

MONARCHIES ARE CLASSED as absolute, and limited or constitutional.

Questions.—What portions of a country are usually the best fitted for manufacturing by water? Why?

What is meant by the government of a country? What are the two principal forms of government among civilized people? What is a republican government? What kind of government has the United States?

What is a monarchy?

How does the sovereign obtain his office? What titles have sovereigns generally? What is the sovereign of Russia called? The sovereign of Turkey?



LUMBERMEN RAFTING LOGS.

An *Absolute Monarchy* is one in which the people have no part in the government, and the power of the Sovereign is unlimited, his will being the only law.

In a *Limited Monarchy* the powers of the Sovereign are defined by a constitution, and the people take part in making the laws, especially such as directly affect themselves or their property.

The Monarchies of Asia and Eastern Europe, except Greece, are all absolute; those of Central and Western Europe are all limited.

The government of Great Britain is the best of limited monarchies.

XVIII. RELIGIONS OF CIVILIZED NATIONS.

The Religion of a people signifies their system of belief in regard to God and the duties they owe to Him.

Among civilized nations there are four different systems of religion: the *Christian*, *Jewish*, *Mohammedan*, and *Brahmanic* or *Buddhic*, all of which originated with the white race. The savage races are worshippers of idols, and of various objects in nature—as animals, the sun, etc.

Christians.—The nations of the New World and of Europe, excepting the Turks, are Christians. They believe in the Bible as the word of God, and in Jesus of Nazareth as the Saviour of the World.

The **Jews**, who are the descendants of Abraham, are scattered among all civilized nations. They believe in the Old Testament, but reject the New. They were once a powerful nation in Western Asia, and Jerusalem was their Capital.

Mohammedans.—The nations of Western Asia and North Africa, and the Turks in Europe, are Mohammedans. They are followers of Mohammed, who lived in Arabia, about six hundred years after the birth of Christ, and claimed to be a prophet of God.

Brahmans.—The Hindoos, who inhabit the middle and

Questions.—What is an absolute monarchy? What is a limited monarchy? What countries are absolute monarchies? What countries are limited monarchies? What is the best of the limited monarchies?

What is meant by the religion of a people? How many systems of religion are there among civilized nations? What do the savage races worship? What nations are Christians? Mention some important truths which they believe. Who are the Jews? How does their belief differ from that of Christians? Who are the Mohammedans?

northern part of India, are Brahmans. They worship three supreme divinities, namely: *Brahma*, the creator; *Vishnu*, the preserver, and *Siva*, the destroyer. *Buddhism*, a modification of Brahmanism, is the religion of most of the Mongolic race.

XIX. COMMERCE AND LOCATION OF CITIES.

Commerce is the exchange of one kind of goods for another.

1. **COMMERCE IS NECESSARY** because each of the different classes of people in a country usually produces much more than is needed of some things, and not enough of others.

Thus the farmers and graziers can produce more grain, butter, cheese, wool, etc., than they need; but they cannot make their supply of tools, their boots and shoes, furniture for their houses, etc.

Manufacturers can make all these; but they cannot themselves produce the wool, hides, etc., from which they are made.

2. **COMMERCE IS CARRIED ON** between different parts of the same country; and also between different countries. The former is called *domestic*

commerce; the latter is called *foreign commerce*.

3. **THE GOODS** to be exchanged may be sent from place to place by means of vessels upon lakes, rivers, and the ocean, or by canals and railroads.

The goods sent out from a country are called *exports*. Those brought in are called *imports*.

Location of Cities.—Villages, towns, and cities grow up where there is anything to cause many people to gather at one particular place.

1. A **GOOD HARBOR** on the sea-coast, or a place beside a large lake or river, where goods can be gathered from the country around, and shipped to distant places, will attract people who wish to engage in commerce. Thus are formed, in time, *large commercial centres*.

At these places, when the country is new, there is formed first a little *village*, with one or two store-houses, from which are sent away, and to which are brought, a few boat-loads of goods every year.

Questions.—What is the religion of the Hindoos? What is the religion of the Mongolic nations?

What is commerce? Why is commerce necessary? How are the goods transported from place to place?

What is domestic commerce? What is foreign commerce? What are exports? What are imports?

Where do villages, towns, and cities grow up? What places are favorable to the growth of commercial towns? Describe the growth of a commercial town.



NEW YORK HARBOR.

THE WORLD

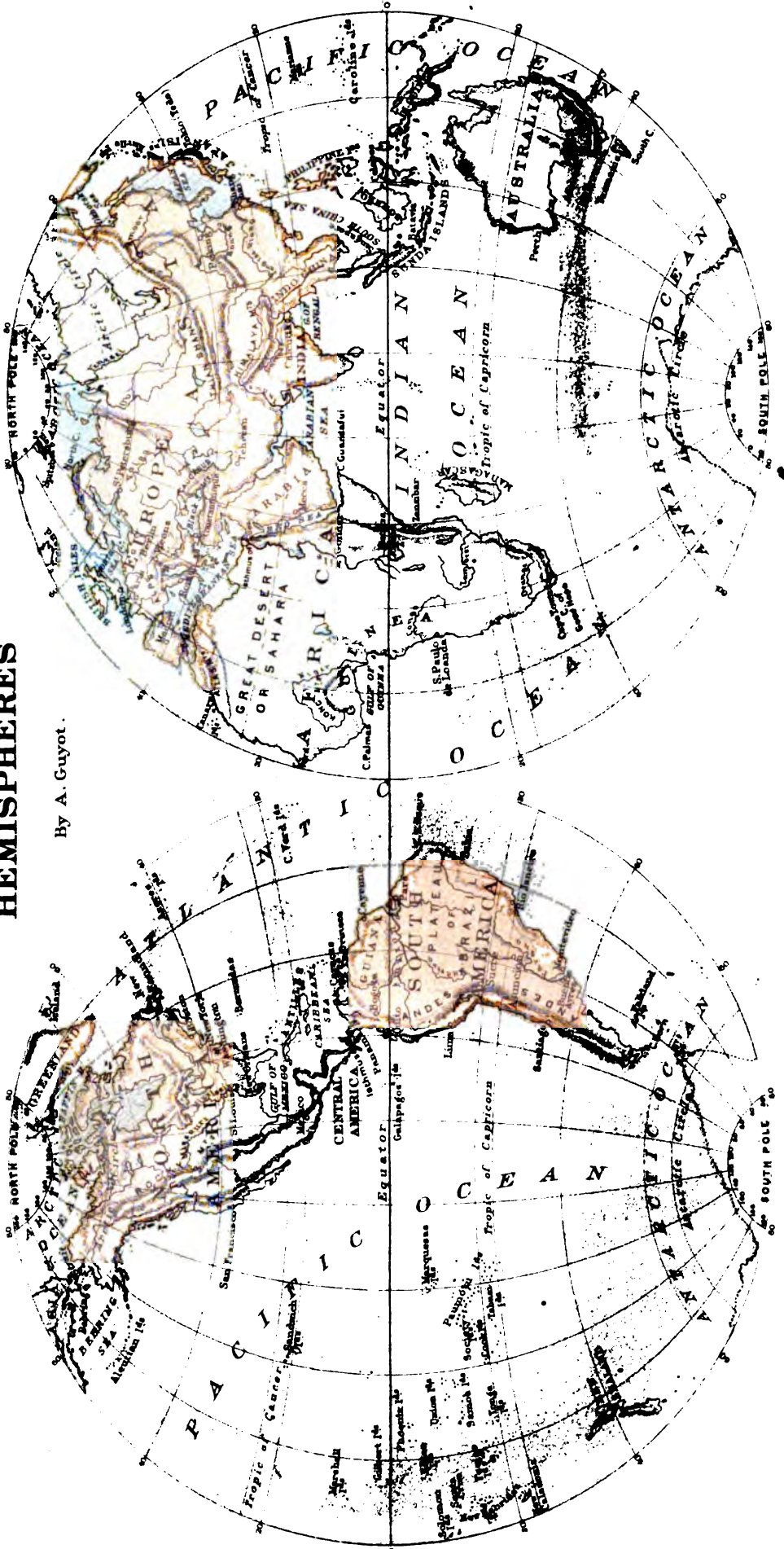
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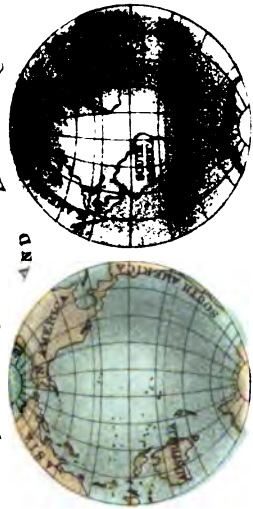
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WESTERN

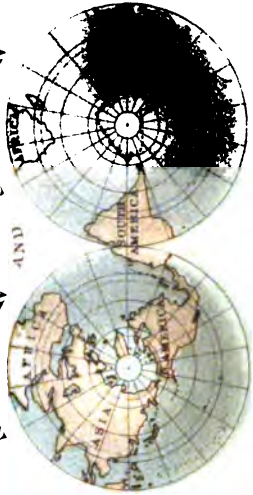
EASTERN



PACIFIC ATLANTIC AND OCEANS



NORTHERN SOUTHERN AND HEMISPHERES



As more people settle in the country, so that more goods are to be sent away, and more brought in, the village grows into a *large town*, sending away and receiving many vessels.

When the whole country around is occupied by a busy people, the town becomes a *great city*; and, if situated on the sea-coast, the harbor is thronged with ships from all countries.

2. RAPIDS OR FALLS upon a river, or RICH MINES, will, as the country becomes settled, attract people desiring to engage in manufacturing and mining.

At these places are formed *manufacturing towns and cities*.

These grow up by degrees, often from the building of a single mill or factory, just as do the commercial centres. A *large manufacturing city* must also have a large commerce, for materials must be bought, and the manufactures must be sold. In any great city both these occupations are always to be found.

XX. THE HEMISPHERES.

Old and New World.—1. The LANDS are not scattered uniformly over all parts of the surface of the globe; but are gathered into two great groups, lying on opposite sides of it.

2. The LARGER GROUP lies in the Eastern Hemisphere, and is called the Old World.

3. The SMALLER GROUP lies in the Western Hemisphere, and is called the New World.

4. The OLD WORLD includes the continents of Asia, Africa, Europe, and Australia, and many large islands; and contains nearly twice as much land as the New World.

5. The NEW WORLD includes the continents of North and South America, the great Archipelago of the West Indies, the Arctic Archipelago, and numerous smaller islands on the coasts.

The Pairs of Continents.—1. The SIX CONTINENTS are so grouped as to form three pairs, which are separated from one another by the three great oceans.

Questions.—What other business must a large manufacturing town have? Why? How are the land masses situated upon the globe? In which hemisphere is the larger group, and what is it called? The smaller group? What lands are included in the Old World? What in the New World? How are the six continents farther grouped?

2. NORTH and SOUTH AMERICA are connected by the narrow Isthmus of Panama. On the east is the Atlantic Ocean, and on the west the Pacific.

3. EUROPE and AFRICA nearly touch each other on the west, and are partly connected, near the middle of the Mediterranean Sea, by the peninsula of Italy and the island of Sicily.

On the west of this pair of continents is the Atlantic, and on the east of Africa is the Indian Ocean.

4. ASIA and AUSTRALIA are nearly connected by the long Malay peninsula in Southern Asia, and the great islands, with only narrow shallow seas between them, which extend nearly to the Australian coast.

On the east is the Pacific Ocean, and on the west of Australia and Southern Asia, the Indian Ocean.

At the north, Asia is united with Europe; but the Ural Mountains and River, and the Caspian and Black Seas, mark the boundary between them.

Northern Continents.—The three northern continents, Asia, Europe, and North America, lie mainly in the Temperate Zone.

They have a very irregular outline, with many great peninsulas and inland and border seas; and are surrounded with numerous large islands.

Europe, the smallest of the three, is situated between the other two, and is the most broken by the sea.

Southern Continents.—The three southern continents are situated mainly in the Torrid Zone.

They have a more regular outline, with few large peninsulas, no vast inland seas, nor many great islands on their borders.

Africa, the largest, situated South of Europe, is the most compact in form.

Questions.—How are the continents of the New World connected? What oceans surround them? How are Europe and Africa situated in respect to each other? What oceans lie adjacent to this pair of continents? How are Asia and Australia partially connected? What oceans border upon these continents at the east and the west? With what continent is Asia united at the west? How is the boundary between them marked? In what zone are the three northern continents mainly situated? Describe their outline and surroundings. Which of the three has the central position, and is most irregular? In what zone are the three southern continents mainly situated? Describe their outline. Which of the three has the central position, and is most compact?

MAP STUDIES.

WHAT two continents lie in the Western Hemisphere? What continents lie in the Eastern Hemisphere? What continents lie wholly north of the Equator? What continents are crossed by the Equator? What continent lies wholly south of the Equator?

In which hemisphere is the larger part of the Pacific Ocean? What continents border upon the Pacific Ocean? In which hemisphere is the greater part of the Atlantic Ocean? What continents border upon the Atlantic Ocean? What continents border upon the Indian Ocean?

What islands lie between North and South America? What great islands and groups of islands lie between Asia and Australia? Where is the island of Newfoundland? Madagascar? Where are the British Isles? The Japan Islands? The islands of New Zealand? Where are the Sandwich Islands? The Society Islands? The Feejee Islands?

What three great peninsulas on the southern coast of Asia? Where is Cape

Horn? The Cape of Good Hope? Cape Verd? Where is the Isthmus of Panama? The Isthmus of Suez? Where is the Gulf of Mexico? The Caribbean Sea? Behring Strait? Where is the Mediterranean Sea? The Japan Sea? The Gulf of Bengal?

What mountain chain is in the southern part of Asia? Where are the Alps Mountains? The Rocky Mountains? The Andes? What mountains in the north-western part of Africa? In the south-eastern part of Australia? Where is the Plateau of Brazil?

Where is the Sahara or Great Desert?

What great river flows into the Gulf of Mexico? Where is the Amazon River? The Nile River?

Where is the Yang-tse-Kiang River? The Yenisei River? The Volga?

Where is the city of New York? Washington? Rio Janeiro? Where is the city of London? Paris? Constantinople? Calcutta? Peking?

NORTH AMERICA.

MAP STUDIES.

Position.—What parallel crosses the most northern portions of North America? What parallel crosses the Isthmus of Panama? What meridian crosses the continent a little west of Hudson Bay and the Gulf of Mexico? Where does the Arctic circle cross North America? Where does the Tropic of Cancer cross it? What three oceans surround North America?

Outline.—What great inland sea indents the northern coast of North America? The eastern coast? With what ocean are both these bodies of water connected? What large body of water indents the Pacific coast?

What great peninsula at the east of Hudson Bay? What two peninsulas at the east of the Gulf of Mexico? What peninsula west of the Gulf of California? What large body of water south of Labrador? What peninsula and islands inclose the Gulf of St. Lawrence? Name the capes and peninsulas of the Arctic coast. Those of the Atlantic coast. Those of the Pacific coast. Where is C. Prince of Wales?

What great island lies south of Florida? What islands at the south and south-east of Cuba? What group of smaller islands north of Cuba? What name is given to the islands upon the Arctic coast? What bodies of water east of the Arctic Archipelago? What land east of Baffin Bay? What island east of Southern Greenland?

Surface.—What does the green color on the map represent? The light brown color? In what part of North America is the land generally high? Where is the greatest extent of low plains? What mountain system is situated near the Atlantic coast? What is the nature of the land between the Appalachian Mountains and the coast? In what direction does the Appalachian system extend?

What mountains lie parallel with the middle and northern part of the Pacific coast? What great mountain system lies east of the Sierra Nevada and Cascade Mountains? In what direction do the Rocky Mountains extend? Where are the Wahatch Mountains? What two high peaks in the Rocky Mountains east of the Wahatch? What one nearly north of the Wahatch?

Lakes and Rivers.—What great stream enters the Gulf of Mexico from

the north? Where is its source? What great tributaries does the Mississippi receive from the west? Where are the sources of the Missouri and the Arkansas? Where is the source of the Red River?

What large stream enters the Mississippi from the east? Where are its sources? What great bodies of water lie east of the Upper Mississippi? What stream is formed by the waters of these great lakes? In what direction and into what water does the St. Lawrence flow? What large river enters Hudson Bay from the south-west? What large lake is connected with the Nelson? What streams enter Lake Winnipeg? Where are the sources of the Saskatchewan?

What large river enters the Arctic Ocean? What three large lakes are connected with the Mackenzie? What tributaries has the Mackenzie from the west? Where are their sources? What large river enters Behring Sea? Where are its sources?

What two large rivers rise on the western slope of the Rocky Mountains near Union Peak? What stream does Snake River help to form? Into what do the Columbia and Colorado flow?

What large stream enters the western part of the Gulf of Mexico? Where are its sources? What mountains give rise to nearly all the great rivers of North America? What large stream has its sources in the Appalachian Mountains?

Countries.—What color marks the boundaries between countries on the map? What is the extreme north-western part of North America called? To what country does it belong? What country bounds Alaska on the east? What forms its other boundaries?

What country occupies all the northern part of North America, excepting Alaska? What are the boundaries of British America? What is the southern part of British America called?

In what part of North America is the United States situated? How is this country bounded? What country lies south and west of the Gulf of Mexico? What two large peninsulas form parts of Mexico? What name is given to that part of North America lying south-east of Yucatan?

TO DRAW NORTH AMERICA.

Construction Lines.—Draw six horizontal lines at equal distances one from another, and cross them by five vertical lines, the same distance apart as the horizontal. Number them as in the diagram.

NOTE.—The space between the numbered lines, in all the continental diagrams, represents the distance of 1,000 English miles, and is the measure (M) used in finding the points on the coasts.

If care be taken to make the construction lines the same distance apart in all the diagrams, all the continents will necessarily be drawn on the same scale.

Contour.—Find Cape Charles (a) at nearly $\frac{1}{2}$ M above line III, and one-sixth M to the left of line 5. Find Cape Prince of Wales (d), at $\frac{1}{2}$ M above line II, and one-sixth M to the right of line 1. Mark the points b, c and e; connect them all, and draw the Arctic coast.

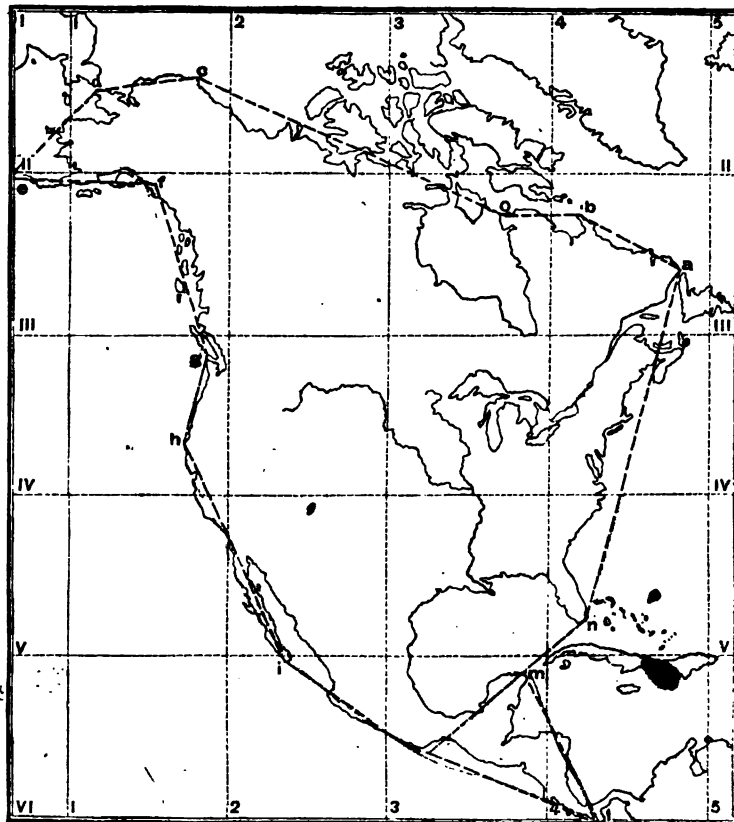
Find the westernmost point of Alaska (e) near line II, and $\frac{1}{2}$ M to the left of line 1. Find the coast of Kenai peninsula (f) near II, at $\frac{1}{2}$ M to the right of 1.

Find Cape Mendocino (h) about $\frac{1}{2}$ M above line IV, and to the left of line 2; and Punta Mariato (l) on line VI, and $\frac{1}{2}$ M to the right of line 4. Mark Cape Flattery (g), and Cape San Lucas (i); connect all the points from d to l, and draw the Pacific coast.

Mark Cape Catoche (m) and Cape Sable (n); connect with a and l, and draw the Atlantic coast.

Exercises on Distances.—How many thousand miles from Cuba to Newfoundland? From the northern coast of the Gulf of Mexico to the southern point of Hudson Bay? From Cape Charles directly west to the Pacific coast? How long is the Gulf of Mexico from east to west? How long is Hudson Bay from north to south? How long is the Island of Cuba?

NOTE.—Teachers may, by means of the uniform spaces of 1,000 miles each, multiply these exercises indefinitely, and the pupil can always estimate the half space or quarter space with sufficient accuracy.



DESCRIPTION OF NORTH AMERICA



I. SURFACE.

IN crossing the middle part of North America, from east to west, great differences in the elevation and character of the surface are apparent.

At the East.—On the Atlantic coast is a low and nearly level plain, ascending gently towards the west.

Next is a hilly country, becoming gradually higher and

Questions.—What may be observed in regard to the surface in crossing North America from east to west?

Describe the surface of North America from the Atlantic coast to the Appalachian Mountains.

Describe the ranges of the Appalachian Mountain system.



more rugged, until the ridges of hills are succeeded by long ranges of low mountains, which form the Appalachian system.

These ranges stand out against the sky like great walls, with their tops slightly uneven, some portions rising higher than others. The higher parts, many of which have separate names, have rounded, regular forms, and appear like vast mounds resting on the top of the mountain wall.

In the Interior.—West of the mountains begins another plain, which extends westward, almost uninterrupted, to the base of the Rocky Mountains.

Near the Appalachian system the interior plain is quite high and hilly; but it becomes gradually lower and more level, until, at the Mississippi River, it is nearly flat and scarcely higher than the plain which borders upon the Atlantic.

Beyond the Mississippi the land rises again, but so gradually that it seems quite level. The ascent continues until, at the foot of the Rocky Mountains, the plain is about twice as high as the ranges of the Appalachian Mountains.

At the West.—The Rocky Mountains rise much higher above the plain at their eastern base than the Appalachian Mountains above the Atlantic plain.

The ranges are deeply notched, so that their upper edges are broken into high sharp peaks, looking somewhat like the teeth of a saw. Many of these peaks are so high that snow and ice remain upon them throughout the year.

At the western base of the Rocky Mountains the land is still higher than the plains at their eastern base, but it descends slightly towards the west.

Questions.—Describe the country from the Appalachian Mountains to the Mississippi. Describe the plain at the west of the Mississippi. How does the height of the Rocky Mountains above this plain compare with that of the Appalachian ranges above the Atlantic plain? Describe the Rocky Mountains. Describe the country lying west of the Rocky Mountains.

This elevated land forms a great plateau, which extends nearly to the Pacific shore, is crossed by many short mountain ranges, and is bordered on the west by the Sierra Nevada and Cascade Mountains.

From the summit of the Sierra Nevada and Cascade Mountains, the land descends nearly to the level of the sea, then rises slightly again, forming low mountain ranges along the Pacific coast.

Natural Regions.—The continent of North America consists of three great natural regions, namely: the Atlantic highlands, on the east; the Pacific highlands, on the west; and the great central plain, occupying all the region between them.

1. **PACIFIC HIGHLANDS.**—The Pacific highlands consist of the great western plateau and the mountain systems which form its eastern and western borders.

The *height of the plateau* increases from one thousand feet in the Arctic portions to eight thousand feet in Mexico, then rapidly diminishes to the Isthmus of Panama.

The *height of the mountain systems* is greatest in the middle part of the United States, between 35° and 40° north latitude. Here the plateau which forms their base is about six thousand feet above the sea level; the ranges rise to twelve thousand, and the highest peaks reach fourteen thousand feet or more.

2. **ATLANTIC HIGHLANDS.**—The Atlantic highland region consists chiefly of the Appalachian mountain system, and its slopes. The ranges of this system are only about three thousand feet high, but the highest peaks, in North Carolina and New Hampshire, are over six thousand feet.

3. **CENTRAL PLAIN.**—The central plain, lying between the two highland regions, extends from the Arctic Ocean to the Gulf of Mexico.

It is divided, north of the great lakes, by a broad swell of land a little above the general level. The northern division slopes towards the Arctic, the southern towards the Gulf.

The dividing swell is called the *Height of Land*.

II. RIVERS AND LAKES.

Their Size.—The rivers and lakes in the central plain of North America are among the largest on the globe.

They form great highways by which all parts of the plain are brought into communication with one another, and the most inland portions have access to the distant ocean.

Questions.—Of how many natural regions is the continent of North America composed? Name them. Of what does the Pacific highland region consist? What is the height of the plateau in different parts? Where are the mountain systems highest? How high is their base in this region? How high are the ranges on an average? The highest peaks?

Of what does the Atlantic highland region consist? What is the average height of the ranges? How high are the highest peaks?

What is the extent of the central plain? How is it divided? In what direction do the two divisions slope? What is the dividing swell called?

What is the size of the rivers and lakes of the central plain? Of what advantage are they to the country?

Systems.—The lakes and streams of the *central plain* are so connected as to form but four great systems.

These systems are the Mississippi and the St. Lawrence, on the south; and the Mackenzie and Hudson Bay systems, on the north.

The *Pacific highland region* has four large streams, all of which have their sources in the Rocky Mountains. They are the Yukon, the Columbia, and the Rio Colorado, entering the Pacific Ocean; and the Rio Grande del Norte, entering the western part of the Gulf of Mexico.

The *Atlantic highland region* has a great number of smaller streams, most of which enter the Atlantic and the Gulf of Mexico. It also sends several large tributaries to the Ohio.

III. CLIMATE AND VEGETATION.

Temperate Region.—The larger part of North America lies in the Temperate Zone, and has a sufficient amount of moisture to give fertility.

Hence there is almost everywhere an abundant vegetation, including extensive forests with a great variety of useful and valuable plants.

Cold Region.—Around Hudson Bay, and near the Arctic coasts, the climate is very cold, and there are fewer useful plants.

Instead of large forests, there are in the best parts only scattering tracts of pine and birch woods. Soon these cease, and on the Arctic coasts only stunted bushes, creeping plants, mosses, and lichens grow.

Tropical Region.—The narrow southern part of the continent is in the Torrid Zone, and has a hot moist climate and a luxuriant vegetation.

IV. INHABITANTS AND POLITICAL DIVISIONS.

Native Inhabitants.—The native people of the Arctic coasts and islands are Esquimaux.

They are a savage people, who clothe themselves with the skins of beasts, and feed upon fish and the flesh of the seal, walrus, and other animals which abound on the icy shores.

Questions.—How many systems do they form? Name them. What great streams drain the Pacific highland region? Where are the sources of these streams?

Into what waters do the streams from the Atlantic highland region mainly flow? How do these streams compare in length with those of the Pacific highland region?

In what zone is the larger part of North America? To what extent is it supplied with moisture? What is its condition in regard to vegetation?

What part of North America has a cold climate? What is the vegetation in this part?

What portion of the continent has a tropical climate? What is the character of its vegetation?

Who are the native people of the Arctic shores and islands? What is their clothing? Their food?

In winter they live in houses built of large blocks of snow; and in summer they shelter themselves under tents of skins, or in huts built of drift-wood which they find on their fishing grounds.

The natives of the great body of the continent are Indians, who are also savages. They are now few, except in the northern portions of the continent, which have not yet been peopled by civilized man.

Whites.—The white inhabitants are descended from European colonists, who came to America in the early part of the seventeenth century, chiefly from the British Isles, Germany, France, and Spain.

Political Divisions.—British America, the United States, Mexico, and the five States of Central America are the principal political divisions of the continent of North America.

Alaska belongs to the United States. Greenland and Iceland belong to Denmark, and are called Danish America. The West Indies belong to different European nations, chiefly to Spain and Great Britain.

Questions.—What is their shelter? Who are the natives of the great body of the continent? What is their number at the present time?

Whence did the white inhabitants originally come? Name the political divisions of the continent. To what country does Alaska belong? What are Greenland and Iceland called? Why? To whom do the West Indies belong?

THE UNITED STATES.

MAP STUDIES.

Position and Contour.—In what part of North America (see Map, page 14) is the United States? What are its boundaries? Name the peninsulas and capes of the Atlantic coast. Name its bays and sounds. Name the capes of the Pacific coast. Where is Long Island? Where are the Bahama Islands?

Surface.—What part of the Pacific highland is included in the United States? What part of the Atlantic highlands? Where are the Rocky Mountains? Where are the Wahatch Mountains? How do the Mississippi River and the Rocky Mountains divide the entire breadth of the country? What mountain ranges on the western border of the Pacific highland?

In what part of the Appalachian Mountain system is the Blue Ridge? Where is the Alleghany range? Where are the Cumberland Mountains? Where are the Green Mountains? Where are the Adirondack Mountains?

Rivers and Lakes.—What system of rivers lies wholly within the United States? Describe the course of the Mississippi, stating where it rises, in what direction it flows, and into what water it enters.

What three great rivers enter the Mississippi from the west? Describe the course of the Missouri; the Arkansas; the Red River.

What great stream does the Mississippi receive from the east? Describe its course. What two large streams flow into the Ohio from the south? What tributary has the Arkansas?

Describe the course of the Rio Colorado, stating where it rises, in what direction it flows, and into what water it enters. Describe the course of the Columbia; the Rio Grande del Norte.

What system of waters forms part of the northern boundary of the United States? What lake of the St. Lawrence system is wholly in the United States?

What river flows through a low valley across the entire Appalachian Mountain system? What river enters Long Island Sound? What three streams enter Chesapeake Bay? Into what water does Roanoke River flow? What river enters Pamlico Sound? Where is Cape Fear River? Where is Ocmulgee River? What two streams unite and enter Mobile Bay? Where is Chattahoochee River?



Divisions of the Country.—Of how many States and Territories do the United States consist? (See Text, page 21.)

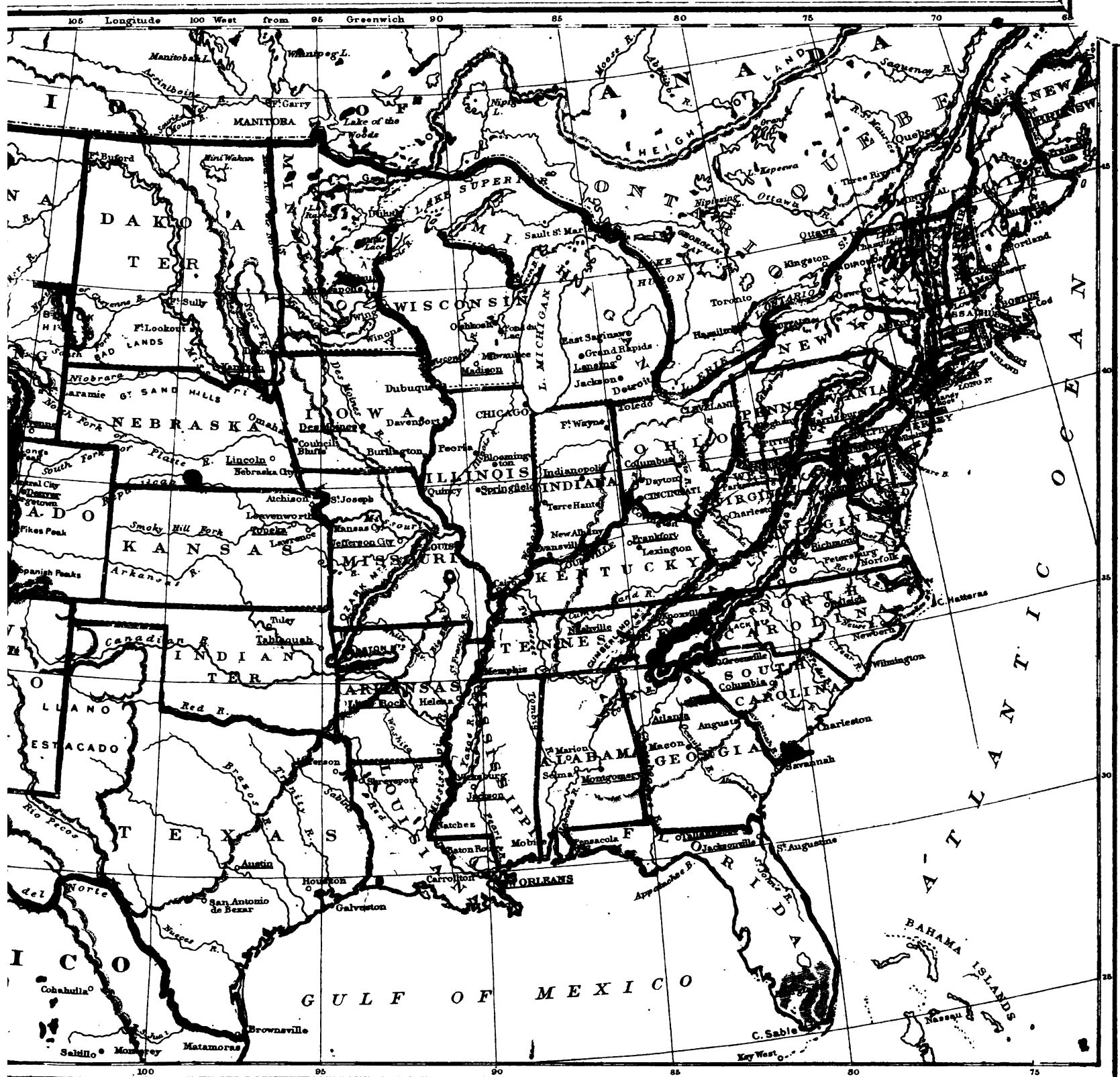
Name the States which border upon the Atlantic Ocean, north of the Potomac River; south of the Potomac.

What States border upon the Gulf of Mexico?

What States and Territory border upon the Pacific?

What States touch the great lakes? What States touch the Ohio? What States lie along the east bank of the Mississippi? The west bank? What five States are included between the Ohio, the Mississippi, and the great lakes? What States lie wholly north of the Missouri?

What States are crossed by the Appalachian Mountain system? What States are



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passed by the Sierra Nevada and Cascade Mountains? What State lies in the plateau west of the Sierra Nevada? Which Territories are crossed by the Rocky Mountains? Which are wholly east of the mountains? Which wholly west? Which touches the ocean?

Cities.—Where is Washington, the capital of the United States? Where is New York?

What two great cities between New York and Washington? Where is Brooklyn? Where is Providence?

What city on Mobile Bay? Where is Charleston? Which of the Atlantic cities has most communication with the great lakes? Why?

Where is New Orleans? What cities in the central plain can most easily send goods to New Orleans? Why? Where is St. Louis? Cincinnati? Louisville? Memphis?

How can St. Louis send goods to the States north of it? How send to the Rocky Mountain region? How send to the Appalachian region? To what parts of the country can Cincinnati send goods by water?

To which of the Atlantic cities is Cincinnati the nearest? What city on the Ohio in Pennsylvania? What large city near the head of Lake Michigan?

Describe the route by which a lake vessel would go from Chicago to Oswego. Where is Milwaukee? What and where is the principal lake city of Michigan? Where is Cleveland? Buffalo? Oswego?

What large city on the Pacific coast?

DESCRIPTION OF THE UNITED STATES.



I. NATURAL ADVANTAGES.

Natural Regions.—The United States includes the southern half of the great central plain of North America; the entire Atlantic plain; nearly all of the Appalachian mountain region; the middle part of the Pacific highland region; and the broad low valleys between the Pacific highlands and the coast.

Inland Waters.—Included within the United States are the entire Mississippi system of rivers; a large part of the St. Lawrence system, nearly all the streams flowing into the Atlantic and the Gulf of Mexico, and the largest rivers entering the Pacific.

These streams and lakes furnish nearly all parts of the country with natural routes of trade; and the great length of coast, with the many fine harbors, prepare the way for a large foreign commerce.

Minerals.—The mineral wealth of the United States is great, including inexhaustible stores of coal and iron in the Appalachian region; copper on the shores of Lake Superior; lead in the region bordering upon the Upper Mississippi; and gold, silver, and quicksilver in the Pacific highlands.

Climate.—1. **TEMPERATURE.**—The United States occupies the southern half of the temperate region of North America.

Questions.—What are the natural regions included within the United States? What river systems are wholly or partly included in the United States? Of what advantage are they to the country? Describe the mineral wealth of the United States.

What part of the temperate region of North America is occupied by the United States? What is the temperature of the most southerly States? Of the middle tiers? Of the most northerly?

In the *most southern* tier of States the climate is nearly tropical, frost being almost unknown. In the *middle* portion of the country the summer is long and warm, and there is little winter. The *northern* States have several months of freezing weather, though the summers are often very hot.

2. **MOISTURE.**—A line drawn from the head of Lake Winnipeg to the mouth of the Rio Grande divides the *high western half* of the country from the *low eastern half*.

The east has an abundance of moisture at all seasons of the year.

The *high western region* has little rain, except on the mountains, and at the west of the Sierra Nevada and Cascade Mountains.

Vegetation.—1. THE MOIST EASTERN HALF of the United States has everywhere an abundant vegetation of forests, grasses, or cultivated plants.

Near the Mississippi, and westward to the borders of the dry region, are extensive tracts of prairie country, with trees only along the margin of the streams, or upon the elevations.

2. THE DRY WEST.—The high plains east of the Rocky Mountains yield but a thin growth of grass and herbage, and the great plateau at the West is almost a desert; but the mountain slopes and valleys, and the coast region west of the Sierra Nevada and Cascade Ranges, have an abundant vegetation.

Questions.—Describe the distribution of moisture in the United States. What is the amount and character of vegetation in the eastern half of the United States? Where are there extensive prairies?

What is the character of the dry western half of the country in regard to vegetation? Describe the vegetation upon the mountains. What is the character of the great plateau in regard to vegetation? In what portions only do useful plants grow? What is the vegetation elsewhere?

II. DIVISIONS OF THE UNITED STATES.

The United States consists of thirty-seven *States*, ten organized *Territories*, and the unorganized *Indian Territory*.

Colorado, in accordance with an act of Congress passed in 1875, will become a State of the Union on the adoption of a constitution which shall be approved by that body.

Groups of States.—The States of the Union may be divided, according to their position, into *six groups*:

NORTH ATLANTIC STATES, usually called **NEW ENGLAND**.

- | | | |
|-------------------|-------------------|------------------|
| 1. Maine, | 3. Vermont, | 5. Rhode Island, |
| 2. New Hampshire, | 4. Massachusetts, | 6. Connecticut. |

MIDDLE ATLANTIC STATES.

- | | | |
|----------------|------------------|--------------------|
| 7. New York, | 9. Pennsylvania, | 12. Virginia, |
| 8. New Jersey, | 10. Delaware, | 13. West Virginia. |
| | 11. Maryland, | |

SOUTH ATLANTIC STATES.

- | | | | |
|---------------------|---------------------|--------------|--------------|
| 14. North Carolina, | 15. South Carolina, | 16. Georgia, | 17. Florida. |
|---------------------|---------------------|--------------|--------------|

GULF STATES.

- | | | | |
|--------------|------------------|----------------|------------|
| 18. Alabama, | 19. Mississippi, | 20. Louisiana, | 21. Texas. |
|--------------|------------------|----------------|------------|

CENTRAL STATES.

- | | | |
|----------------|----------------|---------------|
| 22. Tennessee, | 26. Illinois, | 31. Missouri, |
| 23. Kentucky, | 27. Michigan, | 32. Arkansas, |
| 24. Ohio, | 28. Wisconsin, | 33. Kansas, |
| 25. Indiana, | 29. Minnesota, | 34. Nebraska. |
| | 30. Iowa, | |

PACIFIC STATES.

- | | | |
|-------------|-----------------|-------------|
| 35. Oregon, | 36. California, | 37. Nevada. |
|-------------|-----------------|-------------|

Position of Territories.—The Territories, except the *District of Columbia*, are all in the high western region, around and beyond the Rocky Mountains. Their names are

- | | | |
|----------------|---------------------------|----------------|
| 1. Washington, | 4. Dakota, | 7. Arizona, |
| 2. Idaho, | 5. Wyoming, | 8. New Mexico, |
| 3. Montana, | 6. Utah, | 9. Columbia, |
| 10. Colorado, | 11. The Indian Territory. | |

III. PRODUCTIONS AND COMMERCE.

Agriculture.—1. AGRICULTURE and GRAZING, combined, are the leading occupations of the people of the United States.

2. The CHIEF PRODUCTS of agriculture, in the northern and middle parts of the Union, are corn, wheat, and other grains, potatoes, orchard-fruits, and tobacco; in the south, cotton, sweet potatoes, and rice.

Manufacturing.—Manufacturing is largely carried on in all the States lying to the northward of the Ohio and Potomac rivers. The principal articles produced are flour and

Questions.—Of how many and what divisions does the United States consist? What distant region belongs to the United States? Into how many and what natural groups are the States divided? Name and state the number of the North Atlantic States. The Middle Atlantic. The South Atlantic. The Central States. The Pacific States. Where are the Territories situated? Name them. What are the leading occupations of the people of the United States?

What are the chief agricultural products? In what part of the country is manufacturing most largely carried on? What are the principal articles produced?

meal, cotton and woollen goods, farming and mining tools, and machinery.

Commerce.—The *foreign commerce* is mainly with Europe, and is carried on principally from the ports of the Middle and North Atlantic States.

The *domestic commerce* is chiefly between the ports and manufacturing cities of the Middle and North Atlantic States, and the agricultural States at the south and in the interior of the country.

The *leading exports* are articles of food—as wheat, corn, rice, beef, and pork; and materials for manufacture,—chiefly wool and cotton. The principal *imports* are tea, coffee, sugar, etc., and European manufactures.

Routes of Inland Trade.—The *great lakes* and the *Hudson*, with the *Erie Canal* connecting them, form a complete water highway from the more northern of the Central States to the Atlantic coast.

Railroads also connect all of the inland States with ports on the Atlantic and Gulf coasts; and a railroad across the great western highlands connects the Atlantic with the Pacific coast.

IV. CHIEF CITIES OF THE UNITED STATES.

Location.—The largest cities of the United States are located on or near the Atlantic seaboard, on the Mississippi and its great tributaries, and on the great lakes.

The most populous in the *Atlantic Coast* region are, New York, Philadelphia, Brooklyn, Boston, Baltimore and Newark; in the *Mississippi Basin*, St. Louis, Cincinnati, New Orleans, Louisville and Pittsburg; on the *Great Lakes*, Chicago, Buffalo and Cleveland.

San Francisco is the largest city west of the Mississippi Valley.

Each of the cities named has a population of more than 100,000.

Advantages.—The *coast cities* are at the terminations of the great commercial routes from the interior to the seaboard, and are the chief centres of foreign trade.

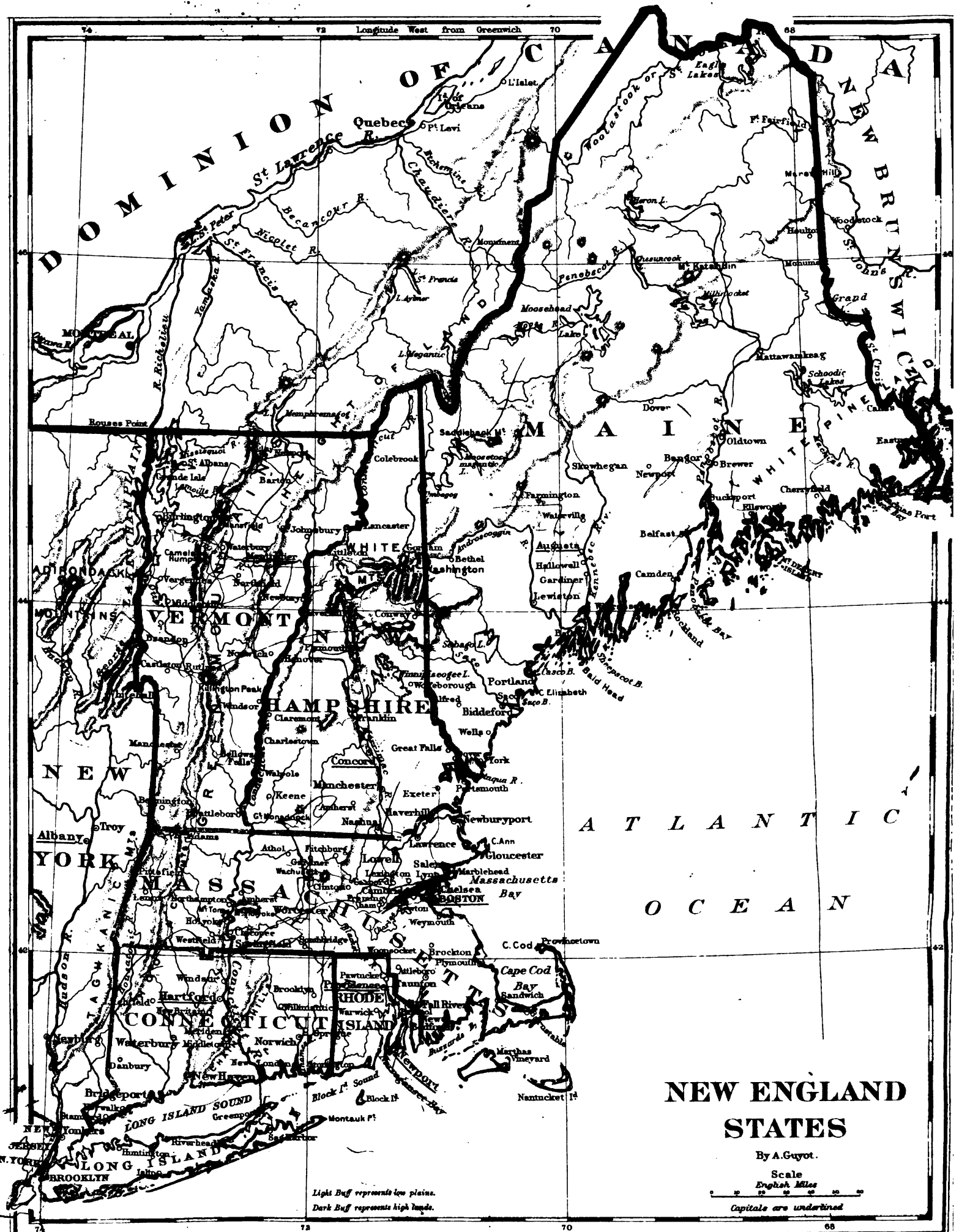
The *inland cities* are the great depôts at which the produce of the interior is collected for shipment to the sea, and from which the imports received in return are distributed throughout the country.

Questions.—With what country is the foreign commerce of the United States mainly carried on? From what ports? Between what portions of the country is the larger part of the domestic commerce? What are the chief exports of the United States? What two occupations furnish all these articles? What are the chief imports?

What water-route is there from the States in the St. Lawrence and Upper Mississippi basins to the Atlantic? What other routes of trade connect these States eastward with the seaboard?

In what regions are the largest cities of the United States situated? Name the most populous of the Atlantic cities. Of the Mississippi cities. Of the lake cities.

What is the largest city lying west of those on the Mississippi? What advantages do the cities named have over others on the Atlantic coast? What gives the inland cities around the advantages over others in the central plain?



VI. GOVERNMENT OF THE UNITED STATES.

Departments.—The CONSTITUTION of the United States divides the government into three distinct departments, namely:—the *legislative*, to make the laws; the *executive*, to carry them into effect; and the *judicial*, to decide questions that may arise in regard to their meaning or application.

Legislative Department.—The legislative power resides in a Congress,—consisting of a Senate and a House of Representatives.

The Senate is composed of two members from each State, elected for six years.

The House consists of members elected for two years, the number from each State being in proportion to the population of the State.

In order to become a law, a "bill" must be approved by a majority of

Questions.—What form of government has the United States? *Ans.* The United States has a republican government. What (see page 10) is a republican government? What is the highest officer of a republic called? Into how many and what departments is the government of the United States divided? What is the duty of the legislative department? Of the executive department? Of the judicial department? In what is the legislative department vested? Of what bodies does Congress consist? How is the Senate composed? The House of Representatives?

each House of Congress, and signed by the President. A bill *vetoed* (forbidden) by the President, however, becomes a law if, on reconsideration, two-thirds of each house approve it.

Executive Department.—The executive department is vested in the President, elected for four years, who is assisted by a *cabinet* of seven persons appointed by himself, with the concurrence of the Senate.

With the President is elected a Vice-President, to take his place in case of removal by death or other cause. The Vice-President is President of the Senate.

Judicial Department.—This department is vested in a *Supreme Court* and inferior courts, whose judges are appointed by the President with the concurrence of the Senate.

NOTE.—Each State has a republican government, with an organization similar to that of the general government.

Questions.—What has the President to do with making the laws?

In what case may a bill, which the President refuses to sign, become a law?

In whom is the executive power vested? What other officer is elected with the President?

What are the Vice-President's duties?

In what bodies is the judicial power vested? How do the judges of the United States courts obtain their office?

NORTH ATLANTIC STATES.

MAP STUDIES.

(FOR MAP DRAWING AND EXERCISES SEE PAGE 27.)

Position and Outline.—How many and what States form this group? Between what two parallels do they lie? Which is the most Northern State? Which the most Southern?

What bounds the North Atlantic States on the east and south? What on the north and west? What are the boundaries of Maine? New Hampshire? Vermont? Massachusetts? Rhode Island? Connecticut?

What two large bays on the southern coast of Maine? What two bays on the eastern coast of Massachusetts? Where is Buzzard's Bay? Narraganset Bay? Long Island Sound? Where is Cape Cod? Cape Ann? Cape Elizabeth?

What mountainous island east of Penobscot Bay? What two large low islands are south of Cape Cod? To what State do they belong? *Ans.* To Massachusetts. Where is Block Island? To what State does it belong? *Ans.* To Rhode Island. What large island south of Connecticut? To what State does Long Island belong? *Ans.* To New York.

General Surface.—What part of the New England States is the higher—the coast region or the interior? Which State lies wholly in the coast region? What river valley crosses the highland region from north to south? What mountain range, with its slopes, occupies nearly all the region west of the Connecticut Valley? What group of high mountains east of the Connecticut Valley? Where is Mount Katahdin? Great Monadnock? Wachusett? Mount Washington? Mount Mansfield?

Drainage.—Into what do nearly all the rivers of the North Atlantic States flow? To what system do the rivers west of the Green Mountains belong? Name the longest three rivers of the North Atlantic States. In what State are the Penobscot and Kennebec? What States are separated, and what States crossed by the Connecticut? What two States have the largest lakes? In what State is Moosehead Lake? Lake Memphremagog? Lake Winnepesaukee? The larger part of Lake Champlain?

Chief Cities.—What large city at the head of Massachusetts Bay? At the head of Narraganset Bay? On Long Island Sound, west of the Connecticut? At the head of Casco Bay? On the Connecticut, north-east of New Haven? On the Merrimac, north-west of Boston? At the head of Casco Bay?

What and where is the capital of Maine? Of New Hampshire? Of Vermont? Of Massachusetts? Of Connecticut? What are the two capitals of Rhode Island?

What important city on the Penobscot, north-east of Augusta? On the Merrimac, south of Concord? On the Connecticut, nearly west of Boston? Midway between Boston and Springfield? On Lake Champlain, north-west of Montpelier?

Maine.—In what direction does the land slope in the northern part of Maine? In the southern part? What high mountain in the middle part of the State?

What three large rivers has Maine? Describe the course of the Penobscot, the Kennebec, the Androscoggin, the St. Croix, the Saco. Describe the location of Portland, stating in what part of the State, and on what body of water it is. Describe the location of Bangor, Lewiston, Biddeford, Augusta, Saco.

New Hampshire.—What and where is the highest land in New Hampshire? What is the highest peak of the White Mountains? What high peak in the southern part of the State?

Name the largest lake and river within New Hampshire. Describe the course of the Merrimac. Of the Connecticut. Describe the location of Manchester, Concord, Nashua, Dover, Portsmouth, Keene.

Vermont.—What mountains cross the entire State from north to south? What is the eastern branch of the Green Mountain chain called? Where are the only low lands in the State?

What are the four chief rivers of Vermont? Describe the course of the Otter. Of the other three. Describe the location of Burlington, Rutland, St. Albans, Montpelier.

Massachusetts.—What part of Massachusetts lies in the coast plain? What high mountain peaks east of the Connecticut Valley? What range in the western part of the State?

What river crosses the north-eastern part of Massachusetts? What part of the State is crossed by the Connecticut? What river enters the head of Massachusetts Bay? Describe the location of Boston, Worcester, Lowell, Cambridge, Lawrence, Lynn, Fall River, Springfield, Salem, New Bedford, Gloucester.

Connecticut.—Which is most extensive in Connecticut—the plain or the highland region? What mountains in the north-western part of the State? What large river crosses Connecticut? Describe its course.

What streams enter the Sound on opposite sides of the Connecticut? Describe the course of each. Describe the location of New Haven, Hartford, Bridgeport, Norwich, Waterbury, New London.

Rhode Island.—What bay in the eastern part of the State? What river enters Narraganset Bay? Describe the location of Providence, Newport.

CHARACTERISTICS.

Position.—The North Atlantic States, usually together called New England, are situated in the northern part of the Appalachian region, between the valley of the St. John's River and that in which Lake Champlain and the Hudson River lie.

Surface.—From the Hudson River and Lake Champlain eastward, the land gradually becomes higher and more rugged, to the summit of the Green Mountains; thence it descends, in a long hilly slope, to the Connecticut River.

The Green Mountains form a continuous chain, which extends, under different names, from the valley of the lower St. Lawrence nearly to Long Island Sound. The chain consists of one main central range of considerable height, with lower parallel ranges and off-shoots on each side.

East of the Connecticut the surface gradually rises again, forming a broad swell of elevated land, which extends from Long Island Sound north-eastward to St. John's River.

There is no continuous mountain chain, but the whole surface is very broken and hilly, and short ranges and groups of mountains of considerable height rise at intervals along the highest part of the swell.

One of these groups, the White Mountains, contains the loftiest peaks of the Appalachian region, excepting the Black and the Smoky Mountains of North Carolina.

Beyond this eastern swell is a narrow plain, at first somewhat high and hilly, but becoming lower and more level towards the coast, especially in the southerly States of the group.

Thus New England consists of three unlike regions, namely: the *coast plain*, and *two highland regions*, separated by the Connecticut Valley.

Rivers and Lakes.—New England is remarkable for the

Questions.—By what name are the North Atlantic States together known? Describe the position of New England. Describe the surface from the Hudson River and Lake Champlain to the Connecticut. Describe the Green Mountain chain. Describe the region immediately east of the Connecticut.

What is remarkable about one of its mountain groups?

Describe the region beyond this eastern swell. Of how many natural regions does New England consist?

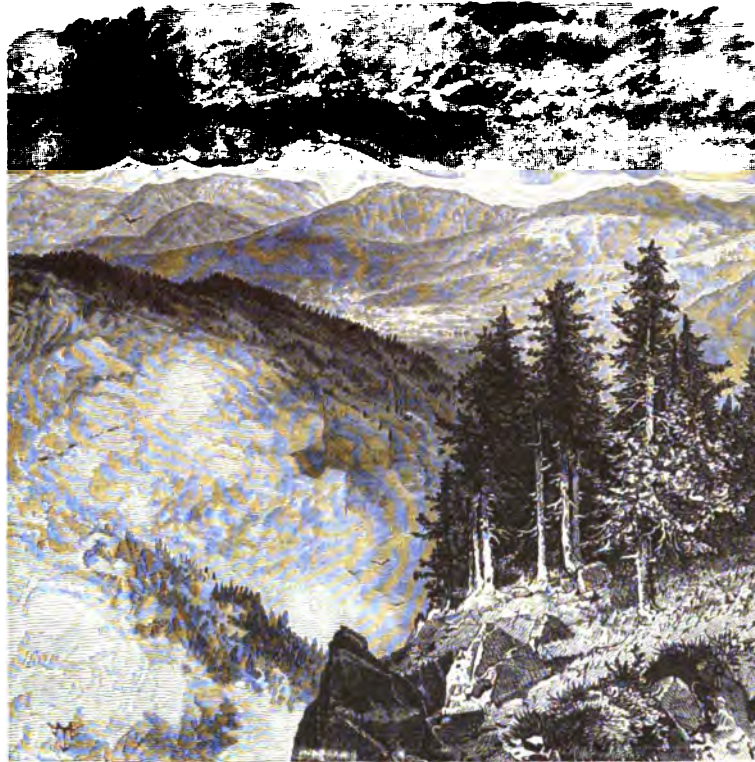
What is remarkable about the scenery of New England?

great number of its lakes, and the beauty of its lake and river scenery.

• The *lakes* are of small size, lying in the hollows among the hills and mountains; but they are remarkably clear, and the surrounding landscape is often reflected in their waters as in a mirror.

Among the *streams*, only the Connecticut, Penobscot, Kennebec and Androscoggin are of considerable length.

Flowing over so irregular a surface, the rivers all have numerous falls and rapids, affording great water-power; but even the largest are navigable for steamboats only through the coast plain, from forty to sixty miles from the sea. They are usually closed by ice during about three months of the year.



THE WHITE MOUNTAINS.

Minerals.—Quarries of fine building stone form the principal mineral wealth of New England. Chief among these are the marble and slate quarries of Vermont, the granite of Massachusetts and New Hampshire, and the sandstone of Connecticut.

Soil.—The soil, though stony, is moderately productive, and the narrow plain bordering upon the Connecticut River is especially fertile.

Forests—Extensive forests occupy the middle and northern parts of Maine and New Hampshire, and cover the entire Green Mountain chain. Elsewhere, timber is not abundant.

Occupations and Productions.—1. **PURSUITS.**—On the coast, ship-building, commerce and the fisheries are leading pursuits; in the interior, farming, lumbering and manufacturing.

2. **AGRICULTURE.**—On account of the rough surface and stony soil the New England farmers give their attention mainly to dairying, wool-growing and the raising of choice breeds of horses and cattle, rather than to grain-growing.

Questions.—Describe the lakes. What are the longest rivers of New England? What is the character of the streams generally? To what distance are the longest navigable? How long are they usually frozen over?

What forms the mineral wealth of New England?

What is the nature of the soil? In what parts of New England are there extensive forests?

What are the leading pursuits in New England?

To what do the New England farmers give their attention chiefly? Why?

The leading farm crops of the group, as a whole, are corn, oats, hay, potatoes and orchard fruits. The three Northern States also raise considerable wheat; Massachusetts and Connecticut large quantities of tobacco.

3. **MANUFACTURING.**—Massachusetts, Rhode Island and Connecticut, the most densely-peopled States of the Union, are among the leading States in manufacturing.

The chief manufactures are cotton and woollen goods, boots and shoes, and machinery of all kinds.

4. **LUMBERING** is extensive in the three Northern States, especially in Maine. The logs are cut in the forests in winter, and thrown into the streams, down which they float to the lumber-mills when the ice breaks up in the spring.

5. **SHIP-BUILDING, COMMERCE AND FISHING.**—Massachusetts and Maine are the leading States in these pursuits.

The chief fisheries carried on are for cod, mackerel, and herring, on the adjacent coasts and near Newfoundland; and the whale fishery in the Pacific.

The leading *exports* of New England are, lumber, marble, granite, ice, manufactures, and dairy products.

SEPARATE STATES AND CITIES.

I. MAINE.

Area, 35,000 sq. m. Pop. in 1870, 637,000.

MAINE builds more ships than any other State in the Union, is one of the first in the exportation of lumber, and is next to Massachusetts in the extent of her fisheries. The northern half of the State has extensive forests, and is but thinly peopled.

Cities.—*Portland*,* the largest city of Maine, is situated on a narrow peninsula projecting from the west shore of Casco Bay.

It has one of the finest harbors on the Atlantic coast, is connected by railroad with the principal cities of the Atlantic States, and with the St.

Questions.—What are the leading farm crops? Which are the leading States in manufacturing? What are the chief manufactures? In what States is lumbering an important business?

Which are the two leading States of the group in commerce, ship-building, and the fisheries? What are the chief fisheries carried on? What are the principal exports of New England?

What pursuits especially distinguish Maine? What is the chief city of Maine, and what are its advantages? How does the northern part of the State compare in population with the southern?

* Cities having above 100,000 inhabitants will be named in SMALL CAPITALS; those between 20,000 and 100,000 in *Italics*; all smaller, in Roman letters.

Lawrence, and is one of the leading commercial towns of New England.

Bangor, the second city, is situated on the right bank of the Penobscot River, north-east of Augusta.

Vessels of large size ascend the Penobscot to this point; and abundant water-power is furnished by a tributary of this river, on both sides of which Bangor is built. This city is an important lumber market.

Lewiston, on the left bank of the Androscoggin River, and Biddeford and Saco, on opposite sides of the Saco River, are the seats of the largest cotton manufactories in Maine.

Both rivers have falls at these points, which afford extensive water-power. The Saco is navigable to Saco, and ship-building and the lumber-trade are carried on to a considerable extent.

Augusta, the capital of Maine, is situated in the southern part of the State, on the right bank of the Kennebec River.

The Kennebec is navigable for sloops to this point, and a dam a short distance above the city affords superior water-power.

II. NEW HAMPSHIRE.

Area, 9,300 sq. m. Pop. in 1870, 318,000.

NEW HAMPSHIRE is celebrated for the beauty of its mountain and lake scenery. For this reason it is often called the "Switzerland of America," while its fine granite quarries have given it the name of the "Granite State." The larger part of the population is located in the southern half of the State.

Cities.—*Manchester*, the largest city of New Hampshire, is situated on the Merrimac River, eighteen miles below Concord. It occupies both sides of the river, but is chiefly on the left.

At this point are the Amoskeag Falls, the most extensive on the course of the Merrimac. Great quantities of cotton goods, delaines, etc., are manufactured here.

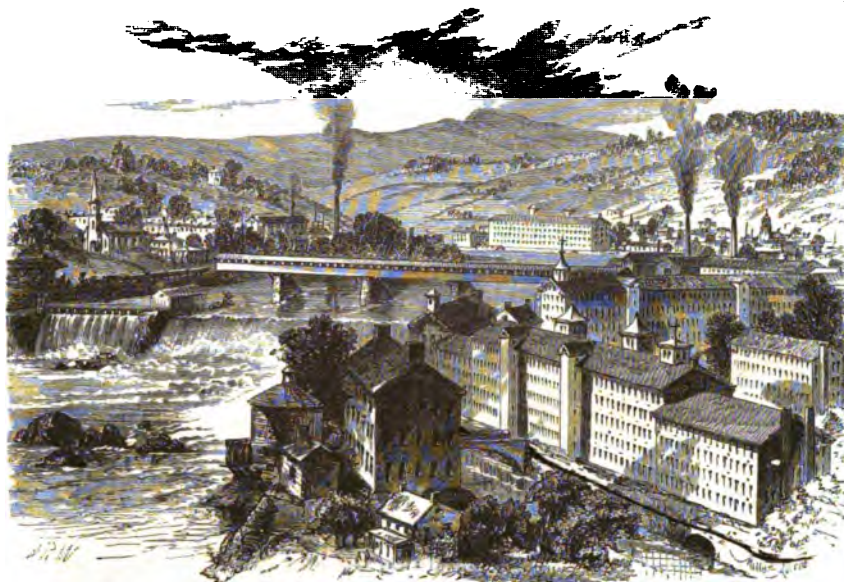
Concord, the capital, and the second city of New Hampshire in population, is situated on the right bank of the Merrimac River, a little south-east of the centre of the State.

Large quantities of the finest granite are quarried here. Concord is an important railroad centre, and is extensively engaged in the manufacture of carriages.

Nashua is situated on the Nashua river, near its junction with the Merrimac. The Nashua River here has a considerable fall affording great water-power, which is used for a variety of manufactures.

Questions.—What are the leading pursuits in Bangor? In Lewiston, Biddeford, and Saco? What can you say of Augusta?

For what is New Hampshire distinguished? What names have been given to this State, and why? What part of the State is the more densely peopled? Name and describe the largest city of New Hampshire; the second; the third.



NEW ENGLAND MANUFACTURING VILLAGE.

Portsmouth, situated at the mouth of Piscataqua River, has a large fine harbor, and is the only important seaport of New Hampshire.

Keene, on the Ashuelot River, is a place of considerable trade, and has a variety of manufactures. Near it are valuable granite quarries.

III. VERMONT.

Area, 10,200 sq. m. Pop. in 1870, 331,000.

VERMONT is the only North Atlantic State not largely engaged in manufacturing. Vermont makes more maple-sugar than any other State, is the leading State of New England in wool-growing, dairying, and stock-raising, and is especially distinguished by the extent of its quarries of marble, both white and colored.

Cities.—The cities of Vermont are few and small. Burlington, the largest, is situated on the shore of Lake Champlain, near the mouth of Winooski River. It is connected by railroad with Montreal and Quebec, as well as with Boston and New York; has a large lumber trade, and is the seat of the University of Vermont.

Rutland, on Otter Creek, is a populous town, noted for its extensive quarries of white marble.

St. Albans, on the Vermont Central Railroad, has large iron works and a manufactory of railroad cars.

Montpelier, the capital, is a fine town situated east of the Green Mountains, on the Winooski River.

IV. MASSACHUSETTS.

Area, 7,800 sq. m. Pop. in 1870, 1,457,000.

MASSACHUSETTS is the most densely-peopled State of the Union, is the first in manufacturing and the fisheries, is second only to New York in the amount of its commerce, is one of the leading States in ship-building, and has, in proportion to its size, more large cities than any other State.

Beds of rich silver and lead ores, believed to be of great extent, have recently been discovered in the north-eastern part of this State, near Newburyport.

The islands of Nantucket and Martha's Vineyard form parts of Massachusetts. Their inhabitants are engaged almost wholly in the fisheries.

Cities.—BOSTON, the capital, is one of the most populous cities of the Union, and second only to New York City as a commercial centre.

It has one of the largest and best harbors on the Atlantic coast, is the terminus of all the principal lines of railway in New England, and is directly connected by rail with the Central States and Canada.

Worcester, situated in the interior of the State, at the junction of several important railroads, is a large manufacturing centre, and the market for the richest agricultural region in Massachusetts. Farming tools and machinery are its leading manufactures.

Lowell is situated on the Merrimac, at the mouth of Concord River. The falls of the Merrimac at this point furnish great water-power, and Lowell is the first city in the Union in the extent of its cotton manufacturing.

Cambridge, very near Boston, is the seat of Harvard University.

Questions.—What is the importance of Portsmouth? What advantage has Keene? How does Vermont differ in occupation from all the other States of this group? In what productions does Vermont take the lead? What is the comparative number of cities in Vermont? What is its largest city? Describe Burlington; Rutland; St. Albans; Montpelier.

In what respects has Massachusetts a leading position among the States of the Union? Describe the city of Boston; Worcester; Lowell. What institution is located at Cambridge?

Lawrence, on the Merrimac, below Lowell, is also largely engaged in cotton manufacturing.

Lynn, situated on Massachusetts Bay, is noted for the manufacture of ladies' shoes, which occupies the larger part of the population.

Fall River, on an arm of Narraganset Bay, has extensive iron-works and cotton-mills, and is connected with New York by a line of steamers which connect with railway for Boston.

Springfield, on the Connecticut, near the southern boundary of the State, is an important railroad centre, and is famous for the extensive manufactory of fire-arms, belonging to the United States government, which is located here.

Salem, on the coast north-east of Lynn, is an old commercial port, formerly noted for its trade with Africa and the East Indies.

New Bedford, on Buzzard's Bay, has more ships engaged in the whale fishery than any other port in the United States.

Gloucester, near Cape Ann, is the leading port of the Union, in the extent to which it is engaged in the cod and mackerel fisheries.

V. RHODE ISLAND.

Area, 1,300 sq. m. Pop. in 1870, 217,000.

RHODE ISLAND is the smallest State in the Union, and, excepting Massachusetts, is the most densely peopled. The finest orchard fruits are largely produced in Rhode Island.

Cities.—Providence, the most populous city, and one of the State capitals, has a large commerce and extensive cotton manufactories. It is the seat of Brown University, and is, excepting Boston, the most populous city of New England.

Newport, the other capital, is beautifully situated on an island in Narraganset Bay and is a fashionable summer resort.

VI. CONNECTICUT.

Area, 4,700 sq. m. Pop. in 1870, 537,000.

CONNECTICUT is noted especially for the extent to which its population are occupied in manufacturing, and for the great variety of small wares produced. This State is also largely engaged in the whale fishery.

Cities.—New Haven, the largest city of Connecticut, is situated on a fine bay entering from Long Island Sound, in the southern part of the State. It is the seat of Yale College, is the third city of New England in population, and is one of the most beautiful cities of the United States, being famous for its magnificent elm trees.

Hartford, the capital, is at the head of steam navigation on the Connecticut, and is largely engaged in the manufacture of fire-arms, sewing-machines, and heavy machinery.

Bridgeport, on Long Island Sound, has extensive manufactories of sewing machines and carriages.

Norwich, at the head of navigation on the Thames River, has numerous cotton and woollen mills, and a variety of other manufactories.

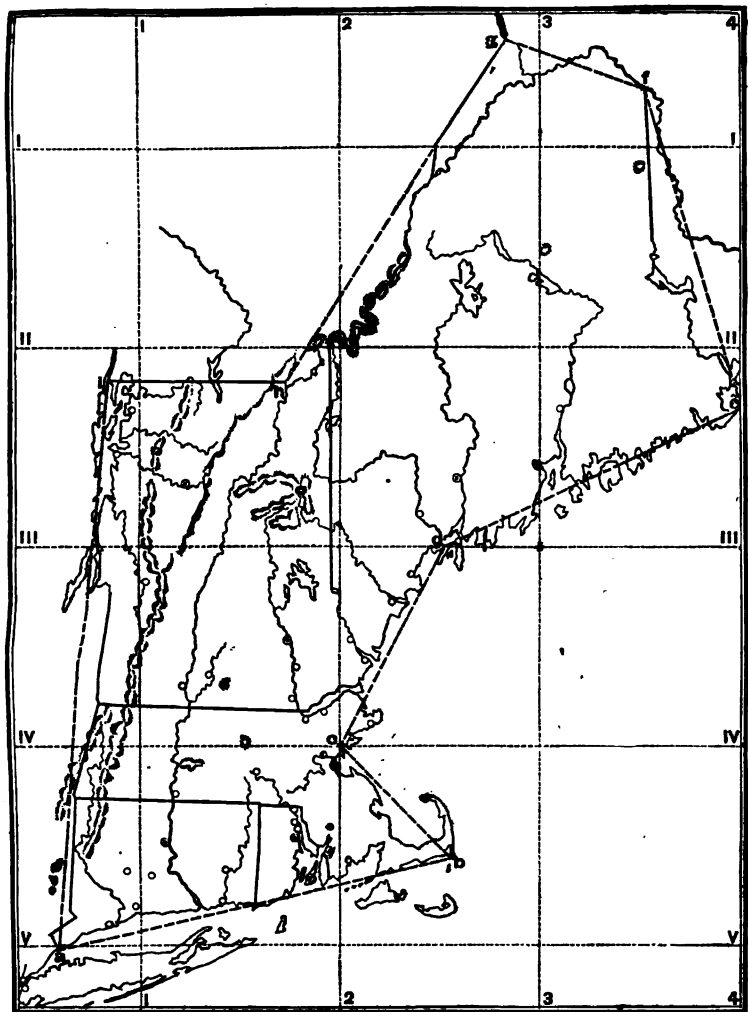
Waterbury, on the left bank of the Naugatuck River, is largely engaged in the manufacture of copper and brass wares.

New London, at the mouth of the Thames, is next to New Bedford in its importance as a whaling port.

Questions.—What can you say of Lawrence? Lynn? Fall River? Springfield. What of Salem? New Bedford? Gloucester? State what is noted in regard to Rhode Island? What can you say of Providence? Of Newport?

For what is Connecticut noted especially? What can you say of New Haven? Of Hartford? What other important manufacturing centres has Connecticut? What business especially distinguishes New London?

TO DRAW THE NORTH ATLANTIC STATES.



Construction Lines.—Draw five horizontal lines, equal distances apart, and cross them with four vertical lines, the same distance apart as the horizontal. Number the construction lines as in the plan given above.

The space between the construction lines, 100 miles, is the measure (M) used in finding the prominent points in the outline.

NOTE.—The space between the lines, in all the groups of States, represents 100 miles; and if, in drawing, care be taken to make this space the same in all the groups, all will necessarily be drawn upon the same scale.

One inch to 100 miles is a good scale for slate or paper, four inches for blackboard. If the pupils provide themselves with rulers one inch wide, perfect uniformity will be secured with ease.

Outlines.—1. Find the northern point of Lake Champlain on line II, $\frac{1}{2}$ M to the left of line 1. Find the south-west point of Connecticut (a) on line V, $\frac{3}{4}$ M to the left of line 1. Connect these points, and draw the western boundaries of Vermont, Massachusetts and Connecticut.

2. At $\frac{1}{2}$ M below line II draw the northern boundary of Vermont (i h) nearly one M in length.

3. Find the north-west point of Maine (g) $\frac{1}{2}$ M to the left of line 3, and a trifle more than $\frac{1}{4}$ M above line I. Connect with h, and draw the north-western boundaries of Maine and New Hampshire.

4. Find the north-east point of Maine (f) $\frac{1}{2}$ M above line I, and $\frac{1}{4}$ M from the north-west point. Connect f and g.

5. From f draw the straight eastern boundary $\frac{1}{2}$ M southward. Find the south-east point of Maine (e) on line 4, about $\frac{1}{2}$ M below line II, connect f and e, and draw St. John's River, Grand Lake, and St. Croix River.

6. Find the north-east point of Casco Bay (d) on line III, $\frac{1}{2}$ M to the right of line 2;—find Lynn Harbor (c), and the south-east point of Cape Cod Peninsula (b) $\frac{1}{2}$ M to the south-east of Lynn. Connect a, b, c, d and e, and draw the coast.

Separation of States.—1. Draw the boundary between Maine and New Hampshire. (The straight line part is $1\frac{1}{2}$ M in length, and a little to the left of line 2, beginning just above line II.)

2. Draw the northern boundary of Massachusetts. (The straight part begins $\frac{1}{2}$ M to the left of line 1, and $\frac{1}{4}$ M above line IV, and is 1 M in length.)

3. Draw the southern boundary of Massachusetts, and the boundary between Connecticut and Rhode Island.

4. Find the south-east point of Vermont (on the Massachusetts boundary $\frac{1}{2}$ M to the right of line 1), draw the Connecticut River.

CLASS EXERCISES.

NOTE TO THE TEACHER.—The following exercises, which form an admirable review, may, or may not be used, at the discretion of the teacher. The method of employing them would be as follows:—The outline map being upon the blackboard, let the pupils be called in succession to designate the several objects in the lists below. In designating an object which is already on the map, the pupil points to it, names it, and describes its position, or, if a river, its course. If the object be not on the map, the pupil locates it in its position and describes as above, and if a city, states its leading interest.

The squares serve to indicate the dimensions of the States, with approximate accuracy; thus, three squares intervene between the extreme northern and southern points of Maine, and two between the eastern and western. Hence the dimensions of the State may be given, approximately, as 300 miles from north to south, and 200 miles east to west. The questions on dimensions are thus readily answered.

Maine.—What are its boundaries? What is its greatest length in miles? What is its greatest breadth?

Mountains.—Locate Mars Hill, Mt. Katahdin.

Lakes.—Locate Grand Lake, Chesuncook Lake, Moosehead Lake, Umbagog Lake.

Rivers.—Designate or locate St. John's River, St. Croix, Penobscot, Kennebec, Androscoggin, Saco.

Cities.—Locate Portland, Bangor, Lewiston, Biddeford, Augusta, Saco.

New Hampshire.—Boundaries? Length? Breadth?

Mountains.—White, Washington, Monadnock.

Lakes.—Connecticut, Winnepiseogee.

Rivers.—Connecticut, Merrimac, Piscataqua.

Cities.—Manchester, Concord, Nashua, Dover, Portsmouth, Keene.

Vermont.—Boundaries? Length? Breadth?

Mountains.—Green, Height of Land.

Lakes.—Champlain, Memphremagog.

Rivers.—Otter Creek, Winooski, Lamoille, Missisquoi.

Cities.—Burlington, Rutland, St. Albans, Montpelier.

Massachusetts.—Boundaries? Length? Breadth?

Mountains.—Taconic, Hoosac, Wachusett, Holyoke.

Rivers.—Merrimac, Charles, Blackstone.

Cities.—Boston, Worcester, Lowell, Cambridge, Lawrence, Lynn, Fall River, Springfield, Salem, New Bedford, Gloucester.

Rhode Island.—Boundaries? Length? Breadth?

Rivers.—Blackstone.

Cities.—Providence, Newport.

Connecticut.—Boundaries? Length? Breadth?

Mountains.—Hoosac.

Rivers.—Thames, Connecticut, Housatonic.

Cities.—New Haven, Hartford, Bridgeport, Norwich, Waterbury, New London.

MIDDLE ATLANTIC STATES

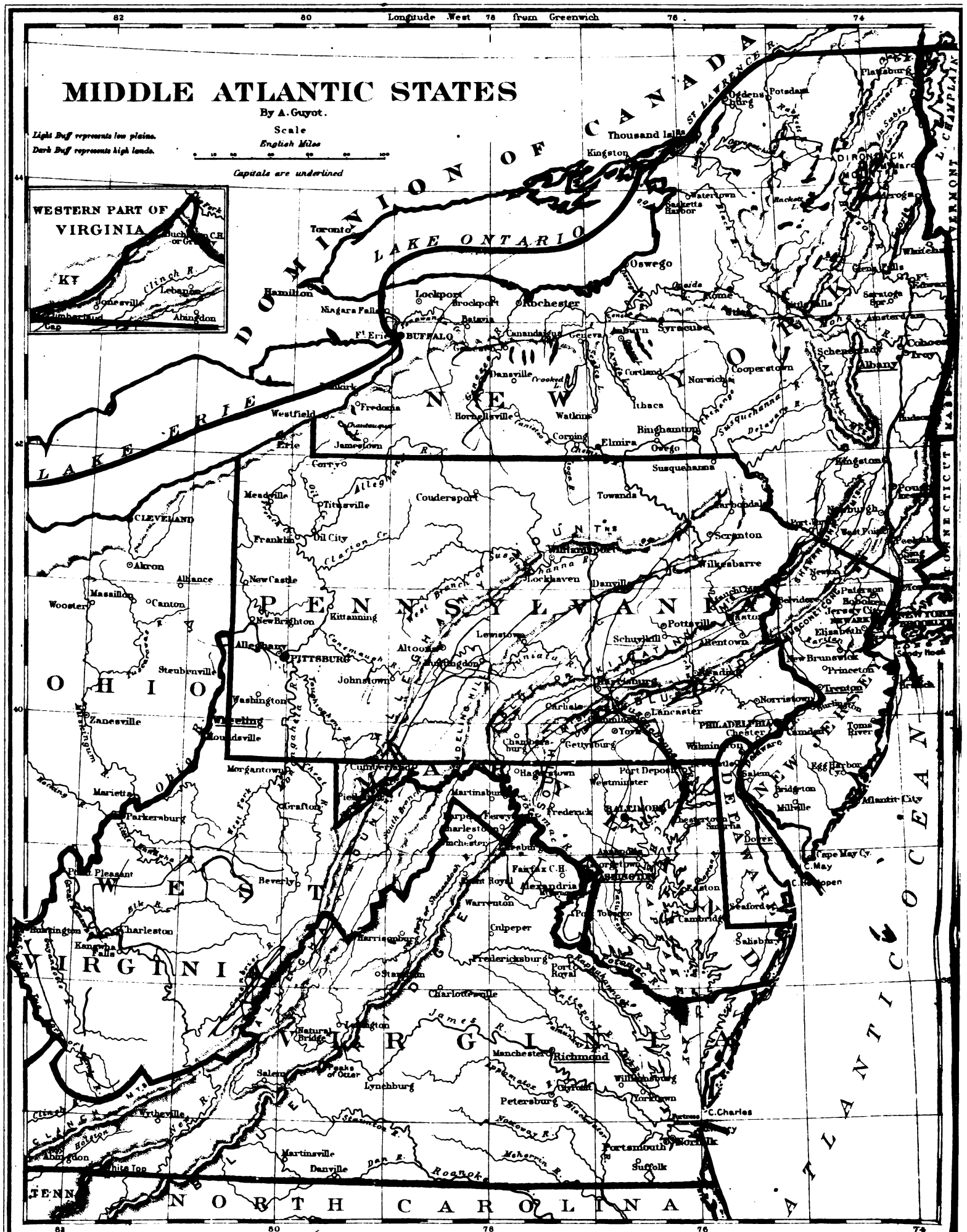
By A. Guyot.

Scale
English Miles

Light Buff represents low plains.
Dark Buff represents high lands.

Capitals are underlined

WESTERN PART OF VIRGINIA



MIDDLE ATLANTIC STATES.

MAP STUDIES.

(FOR MAP DRAWING WITH EXERCISES SEE PAGE 33.)

Position and Outline.—How many and what States form this group? In what part of the Appalachian region are they situated? Between what two parallels of latitude do they lie?

Which is the most northerly of the Middle Atlantic States? Which the most southerly? Which has the most easterly position? Which the most westerly?

Which States border upon the Atlantic? Which upon the great lakes? Which upon the Ohio?

What are the boundaries of New York? Of New Jersey? Of Delaware? Of Maryland? Of Virginia? Of West Virginia? What bay separates New Jersey from Delaware? What two capes at the entrance to Delaware Bay? What bay penetrates Virginia and Maryland? What two capes at the entrance to Chesapeake Bay? What two islands form parts of New York? Ans. Long Island and Staten Island.

General Surface.—In what direction does the Appalachian Mountain system extend across the Middle Atlantic States? In what part of the group does it lie? What part of the group consists of low plains?

In what direction does the Atlantic plain slope, as shown by the course of the streams? In what direction does the low plateau at the west of the mountains slope? What separates the mountain region of the Middle Atlantic States from that of New England?

What is the most easterly of the main ranges of the system called? What is the most westerly? What occupies the space between the Blue Ridge and the Alleghany Mountains?

Drainage.—What system do the rivers of the south-eastern slope of the Middle Atlantic States belong to? To what two systems do those of the north-western slope belong?

Name four of the largest Atlantic rivers lying wholly in this group of States.

Name the longest three streams of the Mississippi system wholly within this group.

Name the two principal streams of the St. Lawrence system within this group.

In what ranges of the mountain system do most of the Atlantic rivers rise?

Chief Cities.—What large city at the mouth of the Hudson? On the west end of Long Island? At the east end of Lake Erie? On the lower course of the Delaware River? On the Potomac River? Near the Chesapeake Bay, north-east of Washington? At the head of the Ohio River? In New Jersey, very near New York? On the Hudson just below the mouth of the Mohawk? On the Genesee, near Lake Ontario? On the lower course of the James River?

What and where is the capital of New York? Of New Jersey? Of Delaware? Of Maryland? Of Pennsylvania? Of Virginia? Of West Virginia?

New York.—What is the surface of the eastern part of New York? Of what does the western part consist? Where are the Adirondack Mountains? The Catskill Mountains?

What is the largest river of New York? Describe the course of the Hudson; the Genesee; the Black. Where is Lake George? Cayuga Lake? Seneca Lake?

Describe the location of New York; Brooklyn; Buffalo; Rochester; Syracuse; Utica; Albany; Troy; Poughkeepsie; Oswego; West Point.

New Jersey.—What is the only portion of this State which is mountainous? What two mountain chains are in the northern part?

What are the largest two rivers of New Jersey? Describe the course of the Raritan; of the Passaic.

Describe the location of Newark; Jersey City; Paterson; Trenton; Elizabeth; Hoboken; Camden; Princeton.

Pennsylvania.—What part of Pennsylvania is occupied by the mountain region? In what direction do the ranges extend across the State? Name the four principal ranges. What is the only portion of the State lying in the Atlantic plain?

Name the largest river of Pennsylvania. Describe the course of the Susquehanna; of the Alleghany; of the Monongahela. What river forms the eastern boundary of Pennsylvania? Describe the course of the Delaware.

Describe the location of Philadelphia; Pittsburg; Alleghany City; Scranton; Reading; Harrisburg; Lancaster; Erie.

Delaware.—What is the surface of Delaware? What river and bay form the larger part of its eastern boundary? Describe the location of Wilmington and Dover.

Maryland.—What is the surface of the eastern part of Maryland? Of the western? What bay crosses the coast region of Maryland from north to south? How do the two divisions compare in extent?

What river forms the larger part of the southern boundary of Maryland? Describe its course. What is the largest river within the State? Describe its course.

Describe the location of Baltimore; Frederick; Cumberland; Annapolia.

District of Columbia.—By what States is this territory surrounded? What great city does it contain?

Virginia.—What is the surface of the entire eastern portion of Virginia? Of the western portion? What is the principal mountain range in Virginia?

What range forms the extreme western boundary? What two ranges form part of the boundary between Virginia and West Virginia?

What three large rivers are wholly within Virginia? Describe the course of the Rappahannock; the York; the James.

Describe the location of Richmond; Norfolk; Petersburg; Portsmouth; Alexandria; Lynchburg.

West Virginia.—What portion of the State lies in the mountain region? What are the principal ranges of this State?

Name the three principal streams within West Virginia. Describe the course of the Great Kanawha; the Little Kanawha; the Cheat. What two rivers form the western boundary? Describe the course of the Sandy.

Describe the location of Wheeling; Parkersburg; Charleston; Huntington.

CHARACTERISTICS.

Position.—The Middle Atlantic States occupy the middle part of the Atlantic highland region, lying between the parallels of 36° and 45° north latitude.

Surface.—1. REGIONS INCLUDED.—This group of States, like New England, includes three unlike natural regions.

On the east is the Atlantic plain, gradually ascending westwards; next the Appalachian Mountain system; and last, the low plateau, at the west of the mountains, descending towards the lakes and the Ohio.

Questions.—Describe the position of the Middle Atlantic States. What natural regions are in part of this group of States? What part of the group is occupied by the mountain region?

2. The APPALACHIAN MOUNTAINS occupy the middle part of the group, extending from the north-eastern limit of New York to the south-western limit of Virginia.

This part of the system consists of two main ranges,—the Blue Ridge and the Alleghany,—with lower parallel ranges between them.

The Adirondack and Catskill Mountains in New York, are detached groups similar to the White Mountains. They contain the highest peaks of the Middle Atlantic States. Several deep valleys cross the entire mountain system, so that streams rising in the most western ranges, or in the plateau beyond, flow into the Atlantic.

3. The ATLANTIC PLAIN The coast region is low and flat, and

Questions.—Of what does the mountain region in the Middle Atlantic States consist? What is the character of the Adirondack and Catskill Mountains? How is the mountain system broken across?

the surface is generally sandy or marshy. This part of the plain is usually called the *tide-water* region.

Near the mountains the country is higher, and has a rolling or hilly surface. This part, extending about half-way from the Blue Ridge to the coast, is called the *upland* region. At its eastern limit is an abrupt slope to the tide-water region, called the "Ridge."*

4. The PLATEAU is considerably higher than the upland region east of the mountains, but resembles it in surface.

Rivers and Lakes.—The rivers of the eastern slope of the Middle Atlantic States, belong to the Atlantic system; those of the western slope to the Mississippi and St. Lawrence systems.

The Atlantic rivers, excepting the Hudson, are navigable only through the tide-water region, being obstructed by rapids or falls where they descend the "Ridge."

The Hudson, lying in the deep valley which separates the mountain region of New England from that of New York, is navigable to the mouth of the Mohawk, and forms an important part of the water-route from the Central States to the sea.

The valley of the Mohawk, separating the Adirondack region from the Catskills, opened a natural route for the Erie Canal, which connects the waters of Lake Erie at Buffalo with those of the Hudson at Albany.

The larger rivers entering the Ohio from this group of States, are navigable from fifty to a hundred miles; those entering the lakes are generally not navigable.

Minerals.—Iron, coal, and copper abound in nearly all the mountainous parts of the Middle Atlantic States; and lead, marble, and gypsum are plentiful in the eastern part of the mountain system. Zinc, salt and petroleum are also abundant.

Questions.—Describe the portion of the Atlantic plain near the sea. What is it called? Describe the portion next to the mountains. What is this part called? How does it terminate on the east? How does the plateau west of the mountains compare in height with the plain at the east? To what systems do the rivers and lakes of the Middle Atlantic States belong? To what extent are the Atlantic rivers generally navigable? How far is the Hudson navigable? Why is it navigable farther than the others? What is the importance of the Mohawk Valley? To what extent are the tributaries of the Ohio in this group of States navigable? The streams entering the great lakes? What are the most abundant minerals of the Middle Atlantic States?

* The position of the "Ridge" is marked on the map by a light shading, like one side of the shading for mountain ranges.

Soil and Forests.—The soil is generally fertile, but the mountain region and the higher parts of the plateau are better adapted to grazing than to grain-growing.

In the tide-water region are extensive pine forests and vast swamps overgrown with cedar and cypress trees. The great Dismal Swamp in Southern Virginia is the most extensive of these. Timber is also abundant throughout the mountain region.

Occupations and Productions.—1. PURSUITS.—Farming, mining, manufacturing, and commerce are the leading pursuits in the Middle Atlantic States.

2. AGRICULTURAL PRODUCE.—The leading crops in this group of States are corn, wheat, oats, potatoes, and orchard fruits.

Maryland and Virginia raise large quantities of tobacco; and New York and Pennsylvania are largely engaged in dairying, stock-raising, and wool-growing.

3. MINING is most important in

Pennsylvania, New York, and Northern New Jersey; coal, iron, copper, and zinc being the chief productions.

4. The leading MANUFACTURES are about the same as in New England, with the addition of flour and meal, starch, and spirituous and malt liquors.

5. COMMERCE.—The chief commercial centres of the Middle Atlantic States are New York, Philadelphia, Baltimore, Richmond, and Norfolk. The leading exports are grain, flour, tobacco, wool, dairy-products, and manufactures.



VIEW ON THE HUDSON RIVER—THE CATSKILL MOUNTAINS.

SEPARATE STATES AND CITIES.

I. NEW YORK.

Area, 47,000 sq. m. Pop. in 1873, 4,383,000.

NEW YORK is the first State of the Union in commerce, and one of the first in manufacturing. It makes about twice as much butter and cheese as any

Questions.—What is the character of the soil generally in the Middle Atlantic States? What portions of the Middle Atlantic States have extensive forests? What is the most extensive of the swamps? What are the leading pursuits of the Middle Atlantic States? What are the leading farm crops of the Middle Atlantic States? What other crop is largely raised? What additional business engages the attention of the farmers in New York and Pennsylvania? What noteworthy facts are stated in regard to New York State?

other State; is next to Ohio and California in the production of wool; and is second to Vermont in the amount of maple-sugar made.

Long Island is the only part of New York lying in the flat coast region. It is devoted mostly to market-gardening and fruit-growing. In the western half of the State, around the small lakes and in the Genesee Valley, is some of the finest wheat land in the Middle Atlantic States.

Cities.—NEW YORK, situated on an island at the mouth of the Hudson, is the terminus of the water route from the Central States to the Atlantic, and of three of the most important railroad routes, and has one of the best harbors on the Atlantic coast. It is the largest city, and forms part of the greatest commercial centre in the New World.

BROOKLYN, on Long Island, opposite New York, and connected with it by several lines of ferry boats, is part of the same great commercial centre. A bridge to connect the two cities is now building.

BUFFALO, at the east end of Lake Erie, is the western terminus of the Erie Canal, and is the principal place for the trans-shipment of freight forwarded by water from the Central States to New York, or the reverse.

ALBANY is the State capital, and the eastern terminus of the Erie Canal. ROCHESTER has great water-power from the falls of the Genesee, and is the seat of an immense flouring business.

SYRACUSE has the largest salt-works in the Union. UTICA is the seat of the State Lunatic Asylum. TROY has large iron-works and manufacturing of railroad cars.

These five cities are great railroad centres on the route, through Central New York, from New York to Buffalo.

OSWEGO has the largest starch factory in the Union. Poughkeepsie is the seat of Vassar Female College. At West Point the United States Military Academy is located.

II. NEW JERSEY.

Area, 8,300 sq. m. Pop. in 1870, 906,000.

THE zinc mines of Northern New Jersey are considered the richest of the United States. New Jersey has also vast deposits of marl which, used as a fertilizer, has added greatly to the productiveness of the soil.

Large areas in this State are devoted to market-gardening, for the supply of the great cities on its borders.

Questions.—What part of the State is particularly favorable for wheat-growing? What portion of the State lies in the flat coast region, and what business does it carry on? Name the largest three cities of New York. What can you say of New York City? Of Brooklyn? Of Buffalo?

What especial advantage has Albany? What business distinguishes Rochester? Syracuse? Troy? What public institution is located at Utica? What advantage have the five cities last named in common? What important manufactory has Oswego? What important institution is located at Poughkeepsie? What one at West Point? What valuable mineral deposits has New Jersey? To what purpose are large areas of its territory devoted?

Cities.—NEWARK, eight miles from New York Harbor, and Jersey City and Hoboken, on the harbor, are parts of the same great commercial centre with New York and Brooklyn.

Newark is distinguished by the great variety of its manufactures. Jersey City and Hoboken are the starting points of several lines of ocean steamers. Hoboken is the seat of Stevens' Institute.

Paterson, at the falls of the Passaic, has large cotton and silk manufactories, and machine-shops.

Trenton, the State capital, at the head of steam navigation on the Delaware, is the seat of extensive iron-works and other manufactories.

Elizabeth, five miles from Newark, is closely connected with New York in business.

Camden, on the Delaware, forms part of the same great commercial centre with Philadelphia. Princeton is the seat of the College of New Jersey and of Princeton Theological Seminary.



BLAST FURNACE.

III. PENNSYLVANIA.

Area, 46,000 sq. m. Pop. in 1870, 3,582,000.

PENNSYLVANIA is the first State of the Union in the extent of its mining operations, and ranks with New York in manufacturing and agriculture. The coal and iron mines most worked are between the Delaware and Susquehanna Rivers, and around Pittsburg.

Inexhaustible supplies of petroleum are found in the Alleghany basin, in the north-western part of the State; and salt springs occur in the Monongahela basin.

Cities.—PHILADELPHIA, the third commercial centre of the United States, is the first city of the Union in the extent and variety of its manufactures. It is distinguished especially by its vast and varied iron works, supplied with

materials from the mines in the eastern part of the State.

PITTSBURG and Alleghany City, at the head of the Ohio River, form the greatest market for bituminous coal and petroleum in the United States; and have extensive iron, glass and copper works, and a brass foundry. Pittsburg is the western terminus of the Pennsylvania Central Railroad.

Scranton is the largest coal market in the eastern coal-field of the State.

Reading, Harrisburg, and Lancaster are markets for rich farming districts, and are largely engaged in manufacturing. Harrisburg is the State capital.

Erie is the largest lake port of Pennsylvania, and the western terminus of the Philadelphia and Erie Railroad.

Questions.—What cities of New Jersey are parts of the great commercial centre around New York Harbor? How are these cities connected? What business distinguishes Newark? What other important manufacturing cities in New Jersey? What interest attaches to Princeton?

In what pursuits has Pennsylvania a high rank? In what parts of the State are the coal and iron mines most worked? What deposits of great value are found in the Alleghany and Monongahela basins? What can you say of Philadelphia? Of Pittsburg, and Alleghany City? What is the importance of Scranton? Of Reading, Harrisburg, and Lancaster? Of Erie?

IV. DELAWARE.

Area, 2,100 sq. m. Pop. in 1870, 125,000.

DELAWARE is, with the exception of Rhode Island, the smallest State of the Union.

Fruit-growing and market-gardening are the chief pursuits of the people. Large deposits of sand, suitable for the manufacture of glass, are found near the head of Delaware Bay.

Cities.—*Wilmington*, the only populous city of Delaware, has large machine shops and car-factories, and an extensive manufactory of gunpowder. *Dover* is the State capital.

V. MARYLAND.

Area, 11,100 sq. m. Pop. in 1870, 781,000.

THE Chesapeake Bay divides the tide-water region of Maryland into two parts, known as the eastern shore and the western shore. The first has but a sparse population.

The oyster fishery is one of the leading pursuits on the shores of the Chesapeake. Rich mines of coal and iron occur in the mountainous parts of the State, and mining is increasing in importance.

Cities.—*BALTIMORE*, the eastern terminus of the Baltimore and Ohio Railroad, is the greatest commercial centre of the Atlantic sea-board south of Philadelphia; and is the only large city in the State. It has extensive iron-works and flouring-mills; exports great quantities of grain, flour, and tobacco; and imports a large amount of sugar and coffee from Brazil and Cuba.

Frederick is growing in importance as a manufacturing town; and *Cumberland* has a large coal trade. *Annapolis* is the capital.

VI. DISTRICT OF COLUMBIA.

Area, 64 sq. m. Pop. in 1870, 132,000.

THE DISTRICT OF COLUMBIA was ceded by Maryland to the General Govern-

Questions.—In what respects is Delaware noteworthy? What branches of agriculture especially characterize Delaware?

What article of value for manufacturing purposes has Delaware? What is the importance of *Wilmington*? Of *Dover*?

How is the tide-water region of Maryland divided? What branch of business is carried on along the shores?

What valuable minerals has Maryland? What is the importance of *Baltimore* commercially?

What branches of trade and manufacturing distinguish *Baltimore*? What towns are next in importance?

What area has the District of Columbia? From what State was it formed?

ment for the location of the capital of the United States. It was governed by Congress until 1871, when a territorial government was organized.

Cities.—*WASHINGTON* is the capital of the United States, and the seat of the National Observatory, the Smithsonian Institution, and other scientific institutions. It is celebrated for the beauty of its situation and surroundings, and the elegance of its public buildings.

Congress meets here annually, and the President, the members of his cabinet, and other high officers of the General Government and representatives of foreign governments reside here.

VII. VIRGINIA.

Area, 38,800 sq. m. Pop. in 1870, 1,225,000.

VIRGINIA is rich in coal and iron, and gold is found in the upland, south of the Rappahannock.

The "Great Valley" of Virginia, west of the Blue Ridge, is one of the finest agricultural regions of the Middle Atlantic States. Virginia is chiefly an agricultural State, and is the second of the Union in the amount of tobacco it produces.

Cities.—*Richmond*, the capital, is at the head of navigation on the James River, and is the present terminus of the Chesapeake and Ohio Railroad. It is an important commercial centre, and has large flouring mills, tobacco factories, and iron works.

Petersburg, at the falls of the Appomatox, has a large trade in grain and tobacco.

Norfolk is the principal sea-port of Virginia, and with *Portsmouth*, on the opposite side of Elizabeth River, forms one of the chief commercial centres south of the Potomac. At *Portsmouth* is a United States navy yard.

Alexandria has a considerable trade in grain and flour. *Lynchburg* has extensive iron works and other manufactories.

Questions.—When was the territorial government organized? How was the District previously governed?

What great city does it contain? What can you say of *Washington*?

What mineral wealth has Virginia? What pursuit chiefly characterizes this State?

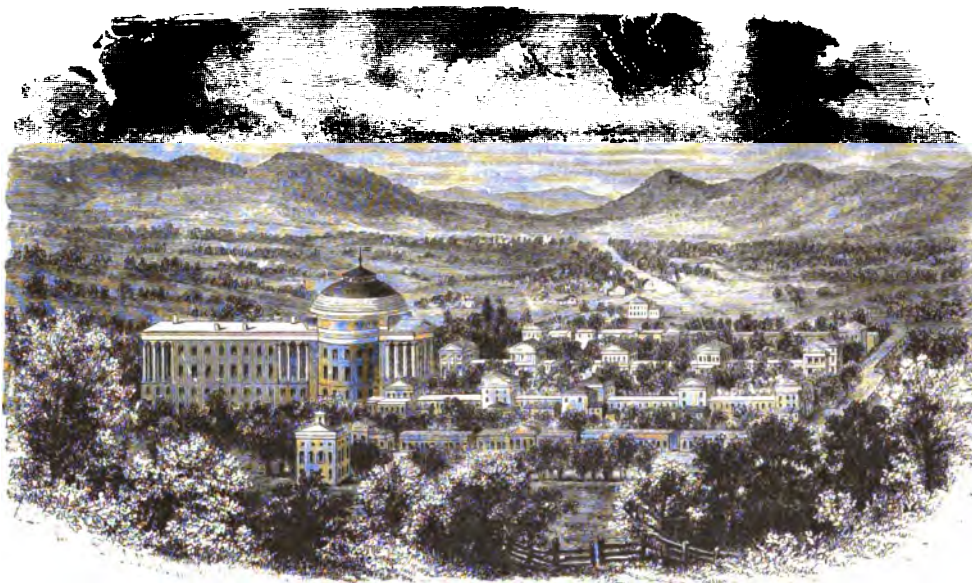
What land within the mountain region is especially valuable?

What is the rank of Virginia as a tobacco-growing State?

What can you say of *Richmond*? Of *Petersburg*? Of *Norfolk* and *Portsmouth*?

What government property is located at *Portsmouth*?

What is the importance of *Alexandria*? What branches of business distinguish *Lynchburg*?



UNIVERSITY OF VIRGINIA.

VIII. WEST VIRGINIA.

Area, 23,000 sq. m. Pop. in 1870, 442,000.

WEST VIRGINIA formed part of the State of Virginia until 1862. A large part of the State is underlaid with beds of bituminous coal and iron; salt abounds in the basin of the Great Kanawha, and petroleum is plentiful in the northern part of the State.

Cities.—*Wheeling*, on the Ohio River and the Baltimore and

Question.—What facts can you state in regard to West Virginia?

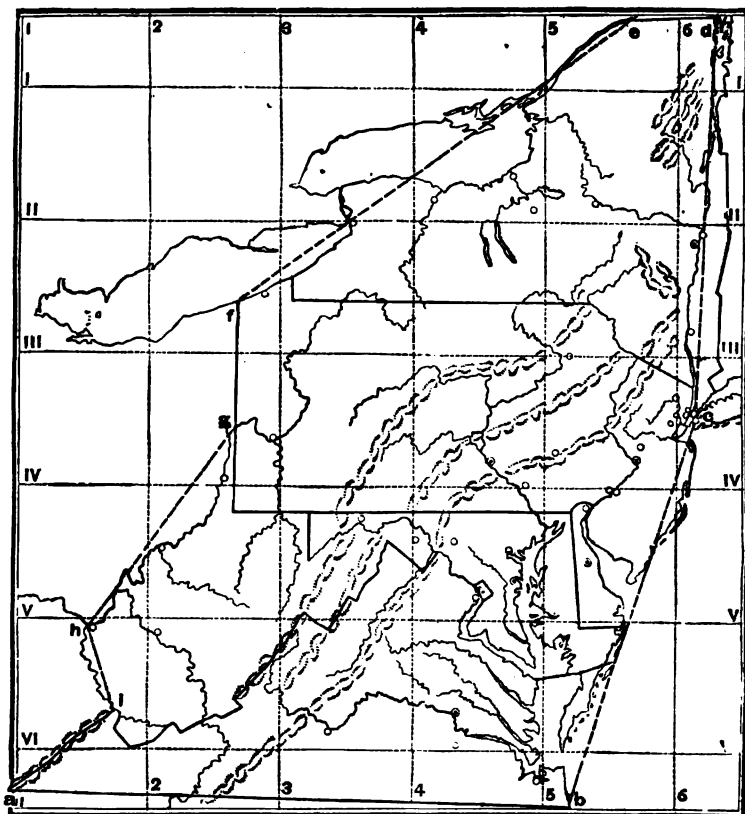
Ohio Railroad, is the present capital, and the only large city. It has a large coal trade, and extensive glass-works, iron-works, and other manufactories.

Parkersburg has a considerable river trade. Martinsburg contains the machine-shops of the Baltimore and Ohio railroad.

Charleston has been the State capital. Huntington is the western terminus of the Chesapeake and Ohio Railroad.

Question.—Name and describe the principal towns.

TO DRAW THE MIDDLE ATLANTIC STATES.



Construction Lines.—Draw six horizontal lines, separated by equal distances, and six vertical lines across the horizontal, separated by the same distance.

Outline.—1. Find the south-west point of Virginia (*a*) on line 1, at $\frac{1}{2}$ M below line VI; and the south-east point (*b*) $\frac{1}{2}$ M to the right of 5, and $\frac{3}{4}$ M below VI. Draw the southern boundary.

2. Find the East River (*c*) $\frac{1}{2}$ M above line IV, and $\frac{1}{2}$ M to the right of line 6, connect with *b*, and draw the coast.

3. Find the north-east point of New York (*d*) at $\frac{1}{2}$ M above line I, and $\frac{1}{2}$ M to the right of line 6; connect with *c*, and draw the eastern boundary of New York.

4. Find the St. Lawrence River (*e*) $\frac{1}{2}$ M to the left of *d*. Draw the northern boundary of New York.

5. Find the north-west point of Pennsylvania (*f*) $\frac{1}{2}$ M to the left of 3, and $\frac{3}{4}$ M above III, and connect with *e*. From *e*, one M towards *f*, is the outlet of Lake Ontario, and one M further, the south shore. From *f* one M towards *e* is the Niagara River. Draw the lakes and the St. Lawrence.

6. Find the northern point of West Virginia (*g*), almost one M directly below *f*; and the extreme western point (*h*), a little below V, and almost $\frac{1}{2}$ M to the left of 2. Connect *f*, *g*, *h*, and draw the Ohio River.

7. Find the north-west point of Virginia (*i*), $\frac{1}{2}$ M above VI, and $\frac{1}{2}$ M to the left of 2. Draw Sandy River and the Cumberland Mountains.

Separation of States.—1. Draw the southern boundary of New York, $2\frac{1}{2}$ M in length, commencing $\frac{1}{2}$ M to the right of *f*. Draw the short boundary line on the west.

2. Find the north-east point of New Jersey, on *c d*, at $\frac{1}{2}$ M above *c*, and complete the boundary of New York.

3. Complete the western boundary of Pennsylvania, extending $\frac{1}{2}$ M below *f*. Draw the southern boundary, $2\frac{1}{2}$ M in length, and the northern boundary of Delaware.

4. Find the middle of the entrance to Delaware Bay, $\frac{1}{2}$ M above V, and $\frac{1}{2}$ M to the left of 6. Draw Delaware River.

5. Draw the southern boundary of Delaware, just below V, one-third M in length, and draw the western boundary.

6. Find the mouth of the Potomac River, nearly $\frac{1}{2}$ M below V, and a little to the left of 5. Find its source, $\frac{1}{2}$ M below the Pennsylvania boundary, and nearly $\frac{1}{2}$ M to the right of 3. Draw the Potomac and complete the boundaries of Maryland.

7. Find the north-east point of West Virginia, on the Potomac, midway between IV and V, and $\frac{1}{2}$ M to the right of 4. Draw the boundary between Virginia and West Virginia.

CLASS EXERCISE.

(See note under "Class Exercise," page 27.)

New York.—*Mountains.*—Adirondack, Catskill. *Lakes.*—George, Seneca, Cayuga, Oneida. *Rivers.*—Hudson, Genesee, Black, Mohawk, Oswego. *Cities.*—New York, Brooklyn, Buffalo, Albany, Rochester, Syracuse, Utica, Troy, Poughkeepsie, Oswego.

New Jersey.—*Mountains.*—Shawangunk, Blue Ridge. *Rivers.*—Raritan, Passaic. *Cities.*—Newark, Jersey City, Hoboken, Camden, Princeton, Paterson, Trenton, Elizabeth.

Pennsylvania.—*Mountains.*—Blue Ridge, Alleghany, Tuscarora. *Rivers.*—Delaware, Susquehanna, Juniata, Alleghany, Monongahela. *Cities.*—Philadelphia, Pittsburg, Alleghany City, Scranton, Reading, Harrisburg, Lancaster, Erie.

Delaware.—*Cities.*—Wilmington, Dover.

Maryland.—*Mountains.*—Blue Ridge, Alleghany. *Rivers.*—Potomac, Patuxent. *Cities.*—Baltimore, Cumberland, Frederick, Annapolis.

Virginia.—*Mountains.*—Alleghany, Blue Ridge, Cumberland. *Rivers.*—Potomac, Shenandoah, Rappahannock, York, James. *Cities.*—Richmond, Petersburg, Norfolk, Portsmouth, Alexandria, Lynchburg.

West Virginia.—*Mountains.*—Alleghany, Greenbrier. *Rivers.*—Great Kanawha, Little Kanawha, Cheat, Sandy, Ohio. *Cities.*—Wheeling, Parkersburg, Charleston, Huntington.

District of Columbia.—Boundaries. *City.*—Washington.

Georgia.—What part of Georgia is mountainous? What three large rivers has Georgia? Describe the course of the Altamaha River; of the Chattahoochee and Flint. Describe the location of Savannah; Atlanta; Augusta; Macon; Columbus.

Florida.—Name the three principal rivers of Florida. Name its largest lake. Describe the course of the Apalachicola River; the Suwanee; the St. John's. What stream forms part of the northern boundary of Florida? Describe the location of Jacksonville; Key West; Tallahassee; Pensacola; St. Augustine.

Alabama.—What portion of Alabama is elevated and somewhat mountainous? Name the largest two streams of Alabama. Describe the course of the Coosa; the Alabama; the Tombigby. Describe the location of Mobile; Montgomery; Selma; Birmingham.

Mississippi.—What two rivers of Mississippi enter the Gulf of Mexico? What one enters the Mississippi River? Describe the location of Vicksburg; Natchez; Columbus; Jackson.

Louisiana.—On which side of the Mississippi is the larger part of Louisiana? What tributary of the Mississippi crosses Louisiana? Describe the course of the Red River; the Washita. Where is Lake Ponchartrain? Soda Lake? Describe the location of New Orleans; Carrollton; Baton Rouge; Shreveport.

Texas.—Which is most extensive in Texas, the lowland or the highland region? What is the high plain in North-western Texas called? (See Map, page 18.) Name the three principal streams of Eastern Texas? Into what do they flow? Describe the location of Galveston; San Antonio; Houston; Austin; Brownsville.

Tennessee.—What is the surface of the eastern part of Tennessee? What are the principal mountains of Tennessee? What two large streams has Tennessee? Describe the course of the Tennessee; of the Cumberland. Describe the location of Memphis; Nashville; Knoxville; Chattanooga.

Arkansas.—What mountains in the north-western part of Arkansas? What great river crosses this State? What three other large streams has Arkansas? Describe the course of the White River; the Washita; the St. Francis. Describe the location of Little Rock; Helena; Hot Springs.

Indian Territory.—What States surround the Indian Territory? Is this territory mainly in the elevated or the low portion of the central plain? What streams cross it? What and where is the chief town of the territory?

central plain; the highest part of the Appalachian Mountain system; and a small portion of the high plain adjoining the Rocky Mountains.

2. The ATLANTIC PLAIN, as in the Middle Atlantic States, includes a tidal water region, which is generally sandy or marshy; and an upland region with a rolling or hilly surface, and a soil of great fertility.

South of Cape Hatteras, the plain is about two hundred miles in breadth. The tidal water region occupies about half of this breadth, and includes the entire State of Florida. The upland terminates at the east in an abrupt slope, as in the Middle Atlantic States.

Questions.—Describe the part of the Atlantic plain included in these States. What is the breadth of the plain? What is the breadth of the tidal-water region? How does the upland terminate?

What natural group (see page 21) is formed by the first four States named? What group do the next four form? To what group do Arkansas and Tennessee belong?

General Surface.—Which are the more extensive in this group of States, low plains or highlands? Which States lie wholly or partly in the Atlantic plain? Which in the great central plain? What States are crossed by the Appalachian Mountains? What are the principal ranges within this part of the Appalachian system? What mountains in North-eastern Arkansas? What mountains in South-western Texas?

Drainage.—What mountain range gives rise to nearly all the rivers entering the Atlantic from this group of States? On which slope of the Blue Ridge do they rise? Where do the streams rising on the west side of the Blue Ridge go? What two large streams of the Mississippi system rise in the southern part of the Appalachian Mountains? What large tributaries has the Mississippi from the west in this group of States? What stream separates South Carolina from Georgia? What river partly separates Georgia from Alabama? What stream forms part of the boundary between Louisiana and Texas? What large river forms the boundary between Texas and Mexico?

Chief Cities.—What great city near the mouth of the Mississippi River? What large city on Mobile Bay? What city at the mouth of Savannah River? What large city on the coast of South Carolina? What city on Cape Fear River near the mouth? On the Mississippi, in Southern Tennessee? On an island on the coast of Texas? What and where is the capital of North Carolina? South Carolina? Georgia? Florida? Alabama? Mississippi? Louisiana? Tennessee? Arkansas? Texas? Indian Territory?

North Carolina.—What part of North Carolina is mountainous? What ranges form the western boundary of the State? Where are the Black Mountains? What are the three principal streams of North Carolina? Describe the course of the Roanoke; the Neuse; the Cape Fear. Describe the location of Wilmington; Raleigh; Newbern; Charlotte.

South Carolina.—What part of South Carolina is mountainous? What are the two principal rivers of South Carolina? Describe the course of the Santee River; of the Great Pedee. Describe the location of Charleston; Columbia; Graniteville.

CHARACTERISTICS.

Position.—The South Atlantic and Gulf States, and the two most southerly of the Central States, all lie south of the parallel of 37° north latitude. Thus they occupy the warm temperate portion of the United States; and all, excepting the western part of Texas, are in the moist eastern half of the country.

Surface and Soil.—1. NATURAL REGIONS.—This group of States includes the broadest part of the Atlantic plain; the lowest portions of the great

Questions.—What is the latitude of the South Atlantic, Gulf, and Southern Central States? What portion of the United States do they occupy? What natural regions are included in this group of States?

3. APPALACHIAN MOUNTAINS.—In the South Atlantic States the two main ranges of the mountain system are nearer together than in the Middle Atlantic States. They are also connected by numerous cross ranges, one of which, the Black Mountains, in North Carolina, contains the highest peaks east of the Rocky Mountains.

In Northern Georgia and Alabama, and in Eastern Tennessee, are lower ranges, parallel with the main chains of the system.

4. The CENTRAL PLAIN.—The lands bordering upon the Gulf of Mexico and the Mississippi are low and flat, like the Atlantic tide-water region; but in the interior, the elevation increases, and the surface becomes rolling or hilly. Both the flats and the rolling plains are highly fertile.

North-western Arkansas is crossed by a region of low mountains, which extends from the Lower Missouri, south-westward nearly to the Red River.

5. The HIGH PLAINS, in North-western Texas and the Indian Territory, are deeply cut by the streams that cross them, so that the surface is quite irregular. They are so dry as to be quite barren.

Rivers and Lakes.

—The Mississippi and

its tributaries connect the Gulf States with all parts of the productive interior of the country, and form the great highways between them.

In Louisiana, below Baton Rouge, the banks of the Mississippi are hardly above the level of the stream in time of high water, and the country a short distance back from the river is still lower.

To protect this land from overflow, banks of earth, called levees, about six feet high and fifteen feet wide, have been built upon the natural banks. They extend from Baton Rouge, one hundred and twenty miles above New Orleans, to forty miles or more below New Orleans.

The streams which enter the Atlantic and the Gulf from the adjacent slopes, are generally navigable only to the borders of the upland region.

Questions.—Describe the Appalachian Mountain region in this group of States. Describe the part of the Central Plain included in the group.

What is the nature of the soil? What States are partly mountainous? Describe the high plains.

What advantage do the Gulf States derive from the Mississippi and its tributaries? Describe the country adjacent to the Mississippi in Louisiana. To what extent are the other streams of this group navigable?

Shallow lakes are numerous in Louisiana and Florida.

Minerals.—Coal, iron and copper, granite and marble abound in and near the Appalachian region; and gold is found at the eastern base of the Blue Ridge, and in the uplands of North Carolina.

Coal and iron are also plentiful west of the Mississippi, especially in Arkansas and Texas. A vast bed of gypsum lies in the highlands between the Arkansas and the Rio Grande.

Forests.—Extensive forests of pitch pine cover the sandy land bordering upon the Atlantic and Gulf coasts, and timber is abundant nearly everywhere.

The forests contain many flowering trees, among which are the tulip-tree, the magnolia, and the catalpa. Many trees and shrubs retain their foliage throughout the year, as the live-oak—one of the most valuable of timber trees—the laurel, and others.

Along the coast the palmetto, a species of dwarf palm, grows; and a kind of locust forms dense thickets on the high plains of Texas.

Occupations and Productions.—1.

PURSUITS.—Agriculture is the chief pursuit

in this entire group of States; but lumbering is largely carried on in the pine forests of the coast region, and manufacturing is fast growing in importance.

2. PRODUCTIONS.—Cotton, rice, sweet potatoes, and corn are the leading crops; but tobacco is largely cultivated, especially in Tennessee and North Carolina. Large quantities of sugar are made in Louisiana.

The leading States in the three crops especially distinguishing this group, are, in the order of their yield, as follows:—

Cotton.—Mississippi, Georgia, Alabama, Louisiana, and Texas.

Sweet Potatoes.—North Carolina, Georgia, Texas, Alabama, and Mississippi.

Rice.—South Carolina, Georgia, Louisiana, and North Carolina.

Questions—What States contain many lakes? What is the mineral wealth of the eastern portion of this group of States? What is the mineral wealth of the western portion of this group of States?

What is the extent of forests in the South Atlantic, Gulf, and Southern Central States? What trees distinguish the forests of these States? What are the leading pursuits of this portion of the United States? What crops are cultivated? Name in their order the States which lead in each of the three most characteristic crops.



COTTON-PICKING.

The principal manufacturing establishments are iron works of every kind, cotton and woolen mills, and lumber-mills. Central Georgia and Alabama, Eastern Tennessee and Western South Carolina are the chief manufacturing districts.

3. The **COMMERCE** of this group of States consists mainly in the exportation of agricultural produce, lumber, and naval stores (pitch, tar, and resin), and the importation of manufactures.

SEPARATE STATES AND CITIES.

I. NORTH CAROLINA.

Area, 50,700 sq. m. Pop. in 1870, 1,071,400.

NORTH CAROLINA contains the highest mountains in the eastern half of North America. Large quantities of lumber, naval stores, and spirits of turpentine are produced in the forest region of this State. In the upland region, near Charlotte, are valuable deposits of gold.

Cities.—Wilmington and Fayetteville have large turpentine distilleries and lumber-mills, and, with Newbern, are the chief commercial centres of the State. The principal articles of trade are lumber, naval stores, and grain.

Raleigh is the State capital, and the seat of State asylums for lunatics and deaf mutes.

Charlotte, in the gold region, is the location of a branch mint for the manufacture of gold coin.

II. SOUTH CAROLINA.

Area, 34,500 sq. m. Pop. in 1870, 705,600.

THE low, wet lands in the tide-water region of South Carolina are especially favorable to rice culture; and the sandy islands which skirt the coast yield large harvests of the finest kind of cotton, known as the Sea Island, or long staple, cotton.

Near Charleston are vast deposits of phosphates, very valuable as fertilizers.

Cities.—*Charleston* is the principal seaport and greatest commercial centre of the South Atlantic States, and is one of the leading rice and cotton markets in the Union.

Columbia is the State capital, and the seat of South Carolina College and the State Asylum for the insane.

Questions.—What are the principal manufacturing interests? The manufacturing districts? What is the extent of the commerce?

State the noteworthy facts in regard to North Carolina. Name the four leading cities. What can you say of Wilmington and Fayetteville? Of Raleigh? Of Charlotte? State the noteworthy facts in regard to South Carolina. Name its leading city. What can you say of Charleston? Of Columbia?

At Graniteville, several extensive cotton-mills have recently been established.

III. GEORGIA.

Area, 58,000 sq. m. Pop. in 1870, 1,184,100.

In the Blue Ridge, in Northern Georgia, are the richest gold mines of the eastern half of the United States. Bituminous coal and iron abound near Rome, in the north-western part of the State. Georgia is the leading Southern State in the extent and variety of its manufactures.

Cities.—*Savannah* is the chief seaport of the State, has a fine harbor and extensive railroad connections, and is next to Charleston as a commercial centre.

Atlanta, the State capital, is an important railroad centre, with a large local trade and extensive iron-works.

Augusta, on the Savannah, at the border of the upland, has fine water-power, and contains extensive cotton and woolen mills.

Macon, an important railroad centre, is the chief market for Central Georgia.

Columbus, on the Chattahoochee, has a considerable cotton trade, and large iron-works and cotton and woolen manufactories.

IV. FLORIDA.

Area, 58,300 sq. m. Pop. in 1870, 187,700.

A **LARGE** part of Florida is still covered with forests, in which pine, live oak, and other valuable timber trees abound; and a vast marsh occupies nearly all the southern portion.

Cotton, sugar, and oranges, lemons and other tropical fruits can be cultivated in all the habitable parts of the State.

An immense business in the manufacture and shipping of lumber has recently been established on the Perdido River, in the extreme western part of Florida.

Cities.—Jacksonville, Key West, and Pensacola—all small places—are the chief commercial centres of the State.

Key West does a large business in the collection and export of sponges, and in turtle fishing. Pensacola is the market for the Perdido lumber region, and is the location of a United States navy yard.

St. Augustine is the oldest town in the United States, and is a favorite winter resort for invalids. Tallahassee is the State capital.

Questions.—What can you say of Graniteville? State the noteworthy facts in regard to Georgia. Name the five leading cities of Georgia. What can you say of Savannah? Of the other four?

State the noteworthy facts in regard to Florida. Name its leading centres of trade. What business distinguishes Key West? Pensacola? What interest attaches to St. Augustine?



A GLIMPSE OF A FOREST IN FLORIDA.

V. ALABAMA.

Area, 50,000 sq. m. Pop. in 1870, 997,000.

MIDDLE and Northern Alabama abound in coal and iron, and quarries of fine marble. This State, like Georgia, is largely engaged in manufacturing.

Cities.—*Mobile* has a fine harbor and extensive railroad connections; and is the second cotton market in the United States.

Montgomery, the State capital, and Selma are the chief markets for the interior, and have a large trade in cotton and other agricultural produce.

At Birmingham, in the coal and iron district, are extensive iron works.

VI. MISSISSIPPI.

Area, 47,200 sq. m. Pop. in 1870, 827,900.

MISSISSIPPI, the first cotton-growing State in the Union, is almost wholly agricultural, and, like Florida, has no large cities.

Cities.—Vicksburg, Natchez, Columbus, and Jackson are the chief centres of trade, their principal business being the shipping of cotton to New Orleans or Mobile. Jackson is the State capital.

VII. LOUISIANA.

Area, 41,300 sq. m. Pop. in 1870, 726,900.

LOUISIANA is the only State of the Union largely engaged in the production of cane sugar, the low lands adjacent to the Mississippi being especially adapted to the growth of the sugar-cane.

An extensive bed of rock-salt underlies an island in Vermilion Bay; and iron, coal, marl, and gypsum are found in the north-western part of the State.

Cities.—New Orleans has water communication with all the Central States, and is connected by rail with all the great cities of the interior and the seaboard. It is the greatest

cotton-market in the world, and the first sugar-market in the United States; and is the State capital.

New Orleans was founded by the French, and many of its people are of French descent. Carrollton, a suburb of New Orleans, is noted for its beautiful residences and fine public gardens.

Shreveport is the market for the produce of Northern Louisiana. Baton Rouge has a considerable river trade.

VIII. TEXAS.

Area, 274,000 sq. m. Pop. in 1870, 818,600.

TEXAS is much the largest State of the Union. Its area is more than five

Questions—State what is noted in regard to Alabama. Name its leading cities. What can you say of Mobile? Of Montgomery and Selma? Of Birmingham?

State what is noted in regard to Mississippi. Name its principal cities. What is their main business? What important facts are noted in regard to Louisiana? What great commercial centre is situated within this State? What are its advantages for trade? What articles of trade distinguish New Orleans? What can you say of Carrollton? Of Shreveport? Of Baton Rouge? What is noted in regard to the area and population of Texas?

times that of New York State; but its entire population is considerably less than that of New York City. The high plains in the western and northern part of the State are too dry for cultivation, but they are covered with shrub and herbage which furnish pasture to vast herds of cattle.

Texas raises more corn than any other of the South Atlantic or Gulf States. Considerable sugar is grown in the low lands, and coffee, indigo, and tropical fruits are cultivated to some extent.

Cities.—Texas has no large cities. Galveston, the chief seaport has one of the best harbors on the Gulf, is connected by railroad with the interior of the State and with St. Louis, and is rapidly increasing in importance.

San Antonio, an old and wealthy town, once a Texan fortress, contains a United States arsenal.

Houston is an important railroad centre, and cotton, grain, and cattle market.

Brownsville, on the Rio Grande, has a large trade with Mexico.

Jefferson, on a tributary of the Red River, is the chief market of North-eastern Texas. Austin is the State capital.

IX. TENNESSEE.

Area, 45,600 sq. m. Pop. in 1870, 1,258,500.

TENNESSEE is the third tobacco-growing State of the Union, and is one of the leading States in corn-growing and the rearing of live-stock.

This State is divided by the Cumberland Mountains and the Tennessee River into three unlike portions. The eastern is mountainous, the middle hilly and somewhat elevated, and the western lower and nearly level. Coal, iron, and copper abound in Eastern Tennessee.

Cities.—*Memphis*, the terminus of several important railroads, is the largest grain and cotton market between St. Louis and New Orleans. *Nashville*, the



VIEW FROM THE STATE HOUSE, NASHVILLE.

State capital, is the chief commercial centre of Middle Tennessee.

Knoxville is the largest city of Eastern Tennessee. Chattanooga is an important railroad centre, in the midst of the coal and iron region, and has extensive iron works.

X. ARKANSAS.

Area, 52,198 sq. m. Pop. in 1870, 484,500.

ARKANSAS is rich in iron, coal, lead, and gypsum; and has zinc mines second only to those of New Jersey. As a cotton-growing State it is next to Texas.

Cities.—Arkansas, like Florida, Mississippi, and Texas, being almost wholly an agricultural State, has no large cities.

Questions.—What is noted in regard to the high plains of Texas? The productions of the State? Name the chief cities of Texas. What is the importance of Galveston? Antonio? Houston? Brownsville? Jefferson? Austin?

State the noteworthy facts in regard to Tennessee. What important commercial centre has Tennessee? What can you say of Memphis? Of Nashville? Knoxville? Chattanooga?

State what is noted in regard to Arkansas. Of the size of its cities.

Little Rock, Helena, and Fort Smith are the chief centres of trade. At Hot Springs are warm mineral springs, highly esteemed for their medicinal qualities. Little Rock is the State capital.

XI. INDIAN TERRITORY.

Area, 69,000 sq. m. Pop. in 1870, 68,000.

THIS large tract of country is peopled by Indian tribes, for whose perpetual home it was set apart by the United States government.

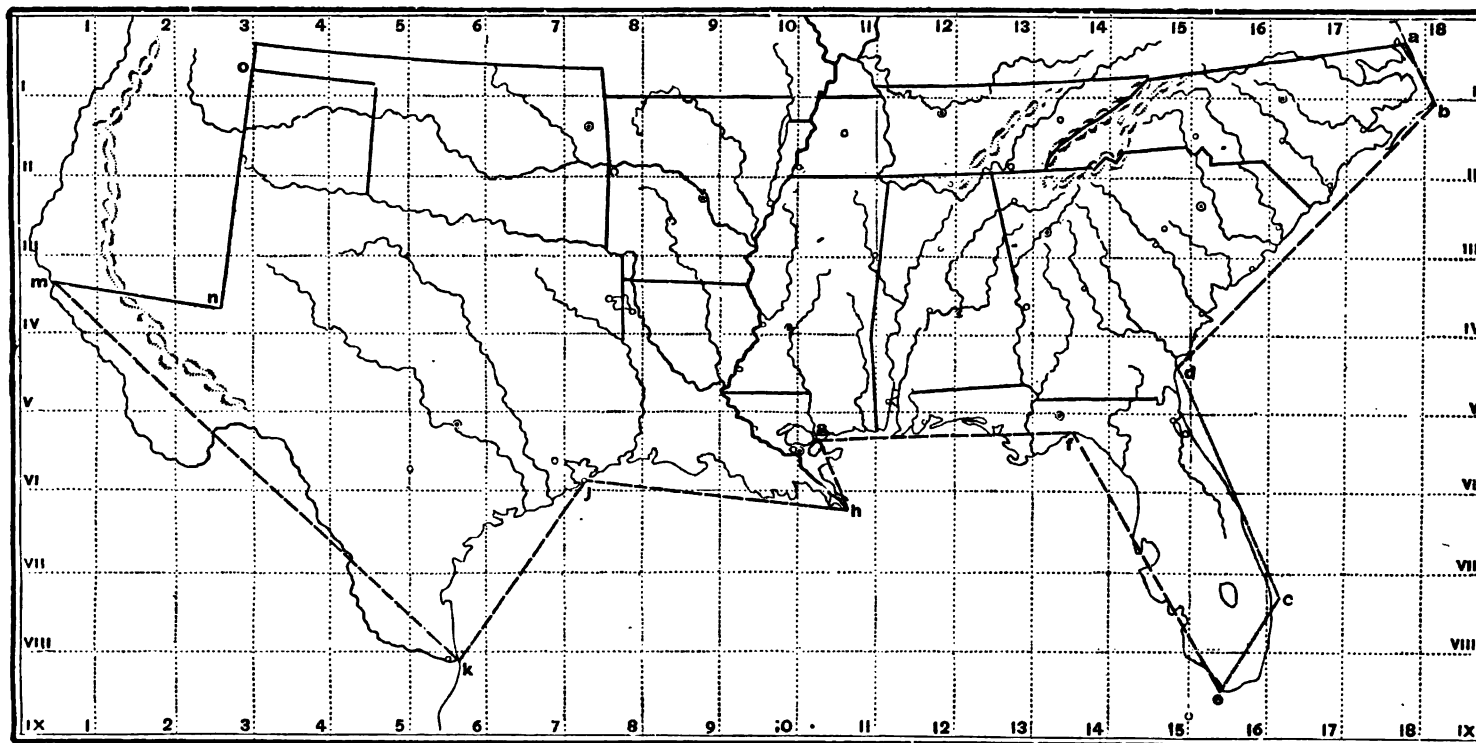
Questions.—What are the chief centres of trade? What distinguishes Hot Springs? Who people the Indian Territory?

Some of the tribes were removed here from the States east of the Mississippi. These carry on agriculture and other pursuits of civilized life, but the native tribes have made little progress. All are under the government of their several chiefs.

Towns.—Tahlequah is the principal town, and the place at which the council of the tribes meets, from time to time, to devise measures for the general good.

Questions.—What is the condition of the different tribes in regard to civilization and government? What is the chief town? What is its especial importance?

TO DRAW THE SOUTH ATLANTIC AND GULF STATES.



Construction Lines. Draw eight horizontal lines at equal distances apart, and cross them by eighteen vertical lines separated by the same distance. Number them as in the Diagram. M = one space, = 100 miles.

Outlines.—1. Mark and connect the points a, b, d, c, e, and draw the Atlantic coast.

2. Mark and connect the points f, g, h, j, k, and draw the Gulf coast.

Mark the point m and draw the Rio Grande.

3. Mark the points n and o, and draw the western and northern boundaries.

Separation of States.—1. Draw the Mississippi River, and complete the boundaries of Arkansas, Louisiana, and Texas.

2. Complete the boundaries of Tennessee and North Carolina.

3. Complete the boundaries of South Carolina, Georgia, and Alabama.

CLASS EXERCISE.

See note under "Class Exercise," page 27.

North Carolina.—*Mountains:* Blue Ridge, Black Mountains. *Rivers:* Roanoke, Neuse, Cape Fear. *Cities:* Wilmington, Raleigh, Newbern, Fayetteville, Charlotte.

South Carolina.—*Mountains:* Blue Ridge. *Rivers:* Santee, Great Pedee. *Cities:* Charleston, Columbia, Graniteville.

Georgia.—*Mountains:* Blue Ridge. *Rivers:* Altamaha, Chattahoochee, Flint. *Cities:* Savannah, Atlanta, Augusta, Macon, Columbus.

Florida.—*Lake:* Okeechobee. *Rivers:* Apalachicola, Suwanee, St. Johns. *Cities:* Jacksonville, Key West, Pensacola, Tallahassee, St. Augustine.

Alabama.—*Mountains:* Cumberland. *Rivers:* Coosa, Altamaha, Tombigbee. *Cities:* Mobile, Montgomery, Selma, Birmingham.

Mississippi.—*Rivers:* Big Black, Chickasawha, Pearl. *Cities:* Vicksburg, Natchez, Columbus, Jackson.

Louisiana.—*Lakes:* Ponchartrain, Soda. *Rivers:* Mississippi, Washita. *Cities:* New Orleans, Carrollton, Baton Rouge, Shreveport.

Texas.—*Rivers:* Trinity, Brazos, Colorado. *Cities:* Galveston, San Antonio, Houston, Brownsville, Austin, Jefferson.

Tennessee.—*Mountains:* Cumberland. *Rivers:* Tennessee, Cumberland. *Cities:* Memphis, Nashville, Knoxville, Chattanooga, Jackson.

Arkansas.—*Mountains:* Ozark. *Rivers:* Arkansas, White, Washita, St. Francis. *Cities:* Little Rock, Helena, Fort Smith, Hot Springs.

Indian Territory.—*Mountains:* Ozark. *Rivers:* Arkansas, Canadian, Washita. *Town:* Tahlequah.



CENTRAL STATES



CENTRAL STATES.

(Excepting TENNESSEE and ARKANSAS.)

MAP STUDIES.

(FOR MAP DRAWING SEE PAGE 47.)

Position and Outlines.—What meridians lie nearest the boundaries of this group of States? What parallel crosses the most northerly States? Name the three most northerly States of the group; the two most westerly; the two most southerly; the two most easterly. Which States border upon the great lakes? Which upon the Ohio? Which upon the eastern side of the Mississippi? Which upon its western margin? Which are bordered or crossed by the Missouri? What are the boundaries of Ohio? Indiana? Illinois? Michigan? Wisconsin? Minnesota? Iowa? Missouri? Kansas? Nebraska? Dakota Territory?

General Surface.—Which have the more elevated surface, the States lying east of the Mississippi or those at the west of it? In which States are the only mountainous regions? What mountains in the eastern part of Kentucky? In the southern part of Missouri? What State is crossed by the Height of Land? In what direction does the land slope in the States north of the Ohio? In what part of Kentucky is the land highest? How do you know this? In what direction does the land slope in the States west of the Mississippi?

Drainage.—Which of the great lakes lie upon the boundaries of the Central States? Which is included wholly within the group? What small lake between Lake Huron and Lake Erie? What connects Lake Michigan with Lake Huron? What connects Lake Superior with Lake Huron? How do the streams entering the great lakes compare in length with those from the same region entering the Mississippi and the Ohio? Describe the course of the Mississippi River; the Missouri; the Platte; the Kansas; the Ohio.

Chief Cities.—What great city in Illinois, near the head of Lake Michigan? In Missouri, on the Mississippi River? In Kentucky, on the Ohio River? In the south-western part of Ohio? In the north-eastern part of Ohio, on Lake Erie? What large city in the western part of Missouri, on Missouri River? What two large cities in Iowa, on the Mississippi River? What large city in Wisconsin, on Lake Michigan? In Michigan, between Lake St. Clair and Lake Erie? In Ohio, on the westernmost part of Lake Erie? What and where is the capital of Kentucky? Ohio? Indiana? Illinois? Michigan? Wisconsin? Minnesota? Iowa? Missouri? Kansas? Nebraska? Dakota?

Kentucky.—Name the largest three rivers wholly within Kentucky. Describe the course of the Kentucky; the Green; the Licking; the Cumberland. Describe the location of Louisville; Covington; Newport; Lexington; Paducah.

Ohio.—Name the largest four rivers within Ohio. Describe the course of the Maumee; the Miami; the Muskingum; the Scioto. Describe the location of Cincinnati; Cleveland; Toledo; Columbus; Dayton; Sandusky; Springfield; Hamilton.

Indiana.—Describe the course of the Wabash River; the White. Describe the location of Indianapolis; Evansville; Fort Wayne; Terre Haute; New Albany; Lafayette; Logansport; Madison.

Illinois.—Describe the course of the Illinois River; the Kaokaskia; the Rock River. Describe the location of Chicago; Quincy; Peoria; Springfield; Bloomington; Galesburg; Aurora; Rockford; Jacksonville; Galena.

Michigan.—How is the northern part of Michigan separated from the southern? Which is the more elevated, the southern or the northern peninsula? Which has the more level surface? Describe the course of Grand River; St. Joseph; Kalamazoo. Describe the location of Detroit; Grand Rapids; Jackson; Saginaw; Kalamazoo; Ann Arbor; Lansing.

Wisconsin.—How does Wisconsin compare in elevation and surface with Illinois? Which part of the State is highest? Describe the course of Wisconsin River; Chippewa. Describe the location of Milwaukee; Fond du Lac; Oshkosh; Racine; Madison.

Minnesota.—In what part of Minnesota is the land highest? What is this part called? What two lakes nearly touch each other on the western boundary of the State? What streams flow from these lakes? Into what part of the sea do the waters of the Minnesota finally flow? Where (see Map of North America) do the waters of Lake Traverse reach the sea? What lakes form parts of the northern and eastern boundaries of Minnesota? What stream enters the head of Lake Superior? Describe the location of St. Paul; Minneapolis; Winona; Red Wing; Stillwater; Duluth.

Iowa.—What boundaries of Iowa are formed by rivers? Name the largest stream within the State. Describe the course of the Des Moines; the Iowa. Where is Dubuque; Davenport; Burlington; Keokuk; Des Moines; Council Bluffs; Iowa City.

Missouri.—What portion of Missouri is mountainous? What is the principal mountain chain? What two noted peaks in the south-eastern part of the State? In what direction does the Missouri River cross the State? Describe the course of the Osage River; the Chariton. Describe the location of St. Louis; Kansas City; St. Joseph; Hannibal; St. Charles; Springfield; Jefferson City.

Kansas and Nebraska.—What large river crosses each of these States? Describe the location of Leavenworth; Lawrence; Atchison; Topeka; Omaha; Nebraska City; Lincoln.

CHARACTERISTICS.

Position.—The Central States all lie in the great central plain of North America, within the Mississippi and St. Lawrence River basins.

Surface.—The surface in most of the Central States is either level or gently rolling; but Dakota and the northern portions of Minnesota and Michigan, which are more elevated, are quite rugged; and in Southern Missouri and Eastern Kentucky there are ranges of low mountains.

The great streams have all cut themselves deep channels, so that they lie considerably below the general level of the surface, and are bordered by high banks called *bluffs*. Seen from the river, these bluffs appear like long ranges of steep hills.

Between the bluffs and the margin of the stream there is, usually, a narrow belt of low, flat land, called *bottom land*.

Rivers and Lakes.—Though the Central States are so far removed from the sea, yet their natural advantages for commerce are nearly as good as if they bordered upon the ocean.

Every State of the group is bordered by one or more great rivers or lakes; and many are crossed by smaller streams, which are navigable into the heart of the State.

Minnesota, Wisconsin, and the eastern part of Dakota, contain an immense number of small clear lakes.

In the Height of Land, in Minnesota, are the head waters of three streams which enter the sea at great distances from one another.

The *Red River of the North* flows northward, helps to form Lake Winnipeg, joins the Saskatchewan, and enters Hudson Bay.

The *St. Louis River* is the extreme source of the St. Lawrence, which drains the great lakes and enters the Atlantic south of Labrador.

The *Mississippi* has its sources in Itasca Lake and other small lakes in the same region, flows southward, and enters the Gulf of Mexico.

Questions.—What is the position of the Central States? What is the surface of these States generally? What portions of the group have a more rugged surface? What regions are mountainous? How have the great streams affected the surface?

What is the appearance of the bluffs? What is between the bluffs and the margins of the streams? How are the Central States situated in regard to advantages for commerce? To what do they owe these advantages? In what regions are there small lakes? What three streams, entering the sea at great distances one from another, rise in the Height of Land? Describe their courses.

Minerals.—The mineral wealth of this group of States is great, the most abundant minerals being coal, copper, iron, lead, and gypsum.

Nearly all the lead mined in the United States comes from the mines on the upper Mississippi, in North-western Illinois, South-western Wisconsin, and Eastern Iowa; and the larger part of the copper, from the highlands on the southern shores of Lake Superior.

Coal is found in nearly all parts of the Ohio basin, also beyond the Mississippi and in Central Michigan.

Iron is nearly as widely spread as coal, but the richest mines are in the south-eastern part of Missouri and the northern peninsula of Michigan.

Salt Springs and other mineral springs are numerous in all the States of the Ohio basin, in Michigan, and in Missouri.

Soil.—The soil is generally very fertile as far west as the meridian of 100° west longitude.

Beyond the one-hundredth meridian, the lack of rain renders

the land much less productive. Still, a light growth of grass and herbage suitable for pasture covers the high plains, and trees grow upon the bottom lands along the streams.

Wherever irrigation has been practised, the soil, even of the high plains, has richly repaid cultivation.

Forests and Prairies.—Forests are plentiful in all the States east of the Mississippi and in Missouri. Large

tracts of country in Michigan, Wisconsin, and Minnesota are covered with white pine, one of the most valuable trees for the manufacture of lumber.

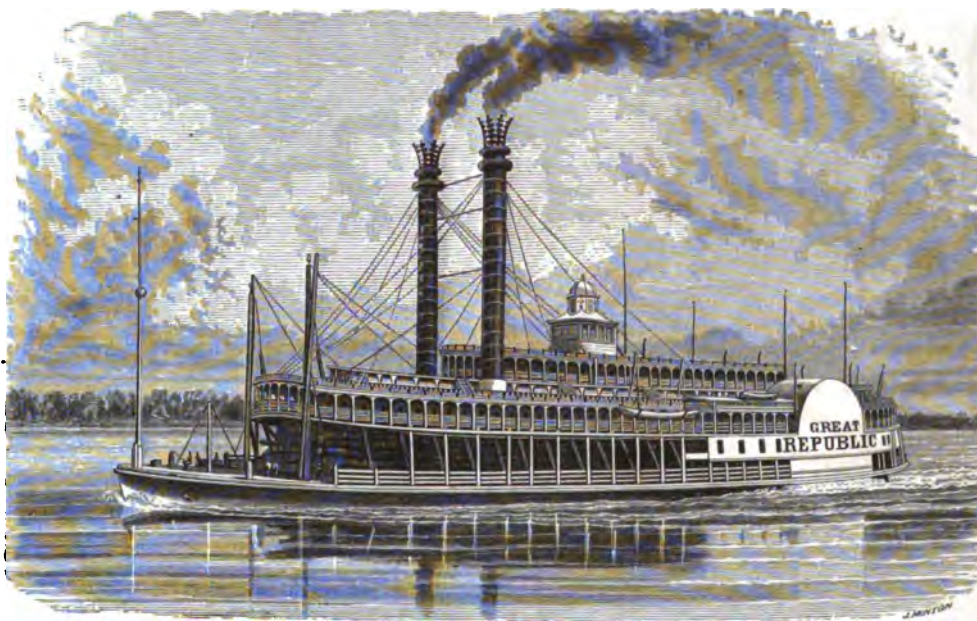
Iowa, Kansas, and Nebraska are chiefly prairie land, having little timber except on the bottom lands of the streams. There are extensive prairies, also, in Illinois and in the other States bordering upon the Mississippi.

Occupations and Productions.—1. **PURSUITS.**—Agriculture and grazing are the main pursuits throughout this extensive group of States; but manufacturing and mining are fast growing in importance.

Questions.—What is the character and extent of the mineral wealth of the Central States? What the productiveness of their lead and copper mines? To what extent are coal and iron found? What is the character of the soil generally? Which region is less fertile, and why?

What is the nature of the vegetation in the dry region? What is the extent of forests in the Central States?

Which States are chiefly prairie land? What are the main pursuits in the Central States?



STEAMBOAT ON THE MISSISSIPPI.

2. **PRODUCTIONS.**—The leading farm crops are corn, wheat, oats, potatoes, hay, and tobacco. Illinois, Iowa, and Ohio are the first three States of the Union in the production of wheat and corn. The three most northerly States raise more wheat than corn, all the others much more corn than wheat.

Hemp is largely cultivated in Missouri and Kentucky, and flax in Ohio.

Immense herds of cattle, sheep, and swine are raised upon the prairies; and large quantities of wool, butter, beef, and pork are produced.

The manufactures of the Central States are chiefly farming implements, iron castings, engines and other machinery; and articles made from grain, hides, and lumber.

3. **THE COMMERCE** of the Central States consists mainly in the exchange of their valuable farm produce for the manufactures and imports of the Atlantic States.

The great natural facilities for trade in this group of States have been increased by numerous canals, connecting the waters of Lake Erie and Lake Michigan with the Ohio and Upper Mississippi; and innumerable railroads give access from all parts of the group to the ports on the Atlantic and Gulf coast.

SEPARATE STATES AND CITIES.

I. KENTUCKY.

Area, 37,700 sq. m. Pop. in 1870, 1,321,000.

KENTUCKY is the first tobacco-growing State of the Union, its yield being nearly three times that of Virginia. It is, also, the first State in the production of hemp.

Mammoth Cave, in the western part of Kentucky, is one of the most remarkable caverns known. There are numerous smaller caves in other parts of the State.

Cities.—**LOUISVILLE**, situated at the head of the rapids of the Ohio, around which a canal has been cut, is one of the great com-

Questions.—What are the leading crops? What grain do the northerly States raise in the largest quantity? What other crops of value are raised? To what extent is the raising of live-stock carried on, and what are the products? What are the chief manufactures of the Central States? What is the nature of the trade of the Central States? State the facts noted in regard to Kentucky.

mercial centres of the Mississippi basin. It has a large trade, especially in tobacco, hemp, pork, and flour.

Covington and **Newport**, opposite Cincinnati, and connected with it by a suspension bridge, have large manufactories of cotton, hemp, and silk goods, and extensive establishments for packing pork.

Lexington, in the middle part of the State, south of Covington, has extensive hemp manufactories, producing rope and bagging; also, manufactories of iron, brass, and silver ware. It is one of the most beautiful cities of the State, and is celebrated for its literary, scientific, and benevolent institutions.

Paducah, just below the mouth of the Tennessee, has a large trade in tobacco, pork, mules, and horses.

Frankfort, on the Kentucky River, is the State capital.

Maysville, beautifully situated on the Ohio, in the north-eastern part of the State, is the largest hemp market in the Union.

II. OHIO.

Area, 39,900 sq. m. Pop. in 1870, 2,665,000.

OHIO is the first State of the Union in the production of wool; the third in corn, wheat, and live-stock; and the fourth in tobacco. It is also the leading State west of the Appalachian Mountains in manufacturing.

Bituminous coal and iron abound in the south-eastern part of the State, and productive salt springs occur in the same region. At Sandusky are immense beds of the finest limestone.

Cities.—**CINCINNATI** is one of the greatest inland centres of trade in the United States. It has communication by the river and by railway with New Orleans; and is connected with all the main routes from the Central States to the Atlantic.

This city has a great trade in farm produce, chiefly grain and pork, and is the main centre from which merchandise from the Eastern cities is distributed to the towns in the adjacent States. Great numbers of river steamers are built here.

CLEVELAND is a great railroad centre, on the water route from the Central States to the Atlantic, and is connected by canal with the Ohio.

It is noted for the number both of steamers and sailing vessels annually built in its ship-yards, and for the extent of its trade, both by lake and rail. Cleveland has extensive iron works and oil refineries,

Questions.—Name its largest three cities. What can you say of Louisville? Of Covington and Newport? What other cities are of importance in the State? State the noteworthy facts in regard to Ohio. Name its largest five cities. Give an account of Cincinnati; of Cleveland.



THE OHIO RIVER NEAR LOUISVILLE

and a variety of other manufactories. Large quantities of copper and iron ore are annually received at this port from the Lake Superior mines.

Toledo, Columbus and Dayton, all great railroad centres, are next to Cleveland in population.

Toledo, situated at the extreme western point of Lake Erie, and connected by canal with the Ohio River, is the chief market of North-western Ohio, and is distinguished especially by its grain trade.

Columbus, on the left bank of the Scioto River, is the State capital, and is the seat of State Asylums for lunatics, for deaf-mutes, and for the blind.

Dayton is situated on the left bank of the Miami River, and connected by canal with both Cincinnati and Toledo. It has abundant water-power, and is one of the largest manufacturing centres in this entire group of States.

Sandusky, at the mouth of Sandusky River, is a lake port and grain market, and is surrounded by inexhaustible limestone quarries.

Springfield and Hamilton are railroad centres in the midst of populous agricultural districts, and are seats of extensive manufactories.

III. INDIANA.

Area, 33,800 sq. m. *Pop.* in 1870, 1,081,000.

RICH beds of coal underlie the south-western part of this State. Near the Ohio is Wyandot Cave, a cavern hardly less remarkable than Mammoth Cave.

Cities.—*Indianapolis*, the State capital, is the terminus of a number of important railroads, and is the chief centre of trade in Indiana.

Evansville, on the Ohio, is the southern terminus of the Wabash and Erie Canal, connecting the Ohio with Lake Erie, at Toledo. It is a large grain and pork market, and has extensive breweries and flouring-mills.

Fort Wayne, Terre Haute, Lafayette, and Logansport are important railroad centres, and markets for rich farming districts. These four cities are all on the Erie and Wabash Canal, and have the advantage of either water or railway carriage for the great amount of farm produce supplied from them.

New Albany and Madison, on the Ohio, have a large river trade,

Questions.—What are the leading interests of Toledo, Columbus, and Dayton? What three cities are next in importance?

State what is noted in regard to Indiana. What are the largest two cities of this State? What can you say of Indianapolis? Of Evansville? What two other important cities on the Ohio? What four important railroad centres are named?

and build many river steamers. New Albany is said to build more than any other city on the Ohio, with the exception of Cincinnati.

IV. ILLINOIS.

Area, 55,400 sq. m. *Pop.* in 1870, 2,540,000.

ILLINOIS is the first State of the Union in the amount of wheat and corn it produces, and the second in the value of its live-stock. With the exception of Ohio it is more extensively engaged in manufacturing than any other State west of the Appalachian Mountains.

The lead region of North-western Illinois is one of the most productive known.

Cities.—CHICAGO is the greatest commercial centre of the St. Lawrence basin, and one of the largest grain, pork, and live-stock markets on the globe. It has a large trade in other farm produce and in lumber.

Chicago is at the head of the water route from the most populous part of the Central States to the Atlantic, and is the western terminus of several of the most important railroad routes.

It is therefore the chief point for the shipment of produce to New York from a vast extent of country adjacent to the upper lakes, and for the receipt of merchandise to be distributed over that region.

Chicago has water communication with the Mississippi, by way of the Illinois and Michigan Canal and the Illinois River.

Quincy, on the Mississippi, is the market for one of the richest and most populous districts of Illinois; has a large river trade, and extensive flouring-mills, lumber-mills, and iron-works.

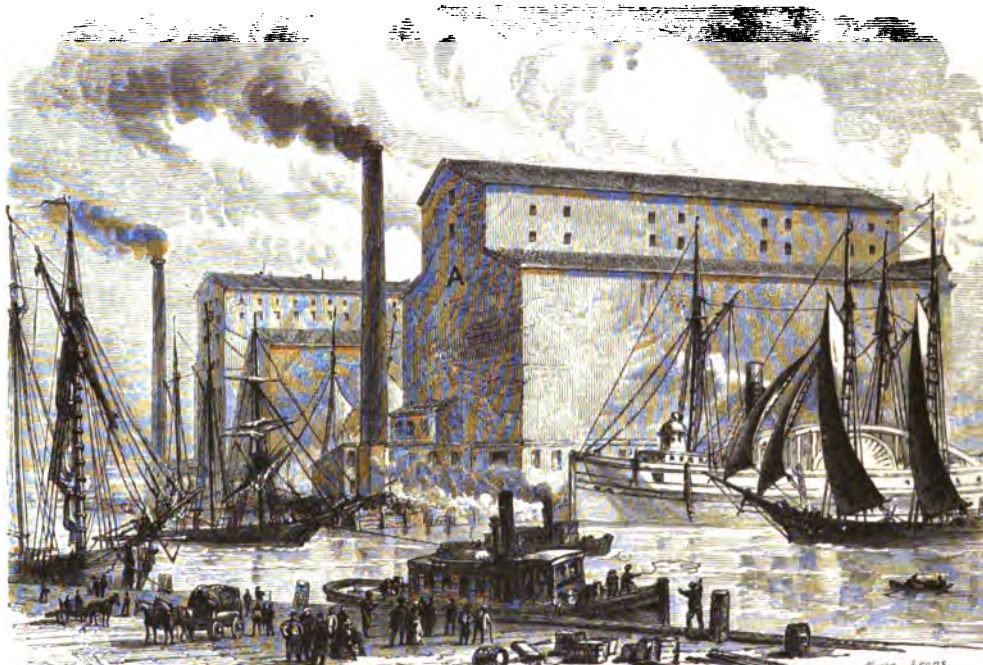
Peoria, a beautiful city on the Illinois River, has water communication with both Chicago and St. Louis, and is the chief market of Central Illinois. Both Quincy and Peoria are important railroad centres.

Springfield, in the central part of the State, is the capital. The surrounding country is highly productive, and is rich in bituminous coal.

Bloomington, north-east of Springfield, is an important railroad centre, near which is the State Normal University.

Aurora and Rockford are largely engaged in manufacturing. The former contains extensive railroad machine shops.

Questions.—State what is noted in regard to Illinois. Name its largest cities. What is the importance of Chicago? What are its particular advantages? What can you say of Quincy? Peoria? Springfield? Bloomington? Aurora and Rockford?



SCENE ON THE CHICAGO RIVER.—GRAIN ELEVATOR.

Galesburg and Jacksonville are distinguished for their superior educational institutions.

Galena, in the extreme northern part of the State, six miles from the Mississippi, is the market of the Illinois lead region.

V. MICHIGAN.

Area, 56,000 sq. m. Pop. in 1870, 1,184,000.

MICHIGAN is composed of two peninsulas lying on opposite sides of Lake Michigan.

The northern peninsula is rich in iron, and its copper mines are among the most productive in the world. Masses of nearly pure copper, of several tons weight, have been taken from these mines.

The southern peninsula contains a rich coal-field, and valuable beds of gypsum, together with productive salt springs in the Saginaw basin.

Cities.—*Detroit* is the greatest commercial centre of Michigan. It has a large trade with the copper region of the northern peninsula, and with ports on the lower lakes and the St. Lawrence, the chief articles of trade being grain and lumber.

Grand Rapids, at the rapids in Grand River, forty miles from Lake Michigan, has fine water-power, steam navigation to the lake, and good railroad connections. It is extensively engaged in manufacturing, and is the centre of trade for a region rich in salt, gypsum, limestone and pine timber.

Jackson and Kalamazoo are important railroad centres, and largely engaged in both trade and manufacturing. The latter is the seat of Kalamazoo College, and of the State Asylum for the Insane.

Saginaw, on Saginaw River, twenty-two miles from its mouth, has steam navigation to Lake Huron, and railroad connection with all parts of the State. It contains extensive salt-works and lumber-mills, and exports large quantities of salt and lumber.

Ann Arbor is the seat of Michigan University. Lansing is the State capital.

VI. WISCONSIN.

Area, 53,900 sq. m. Pop. in 1870, 1,055,500.

THE south-western part of Wisconsin lies in the lead region of the Upper Mississippi, and the northern part includes a portion of the Lake Superior copper region. Beautiful marble is found near the Menomonee River.

Questions.—What smaller cities are named in Illinois, and what is their importance? Of what does Michigan consist? Describe the mineral wealth of the northern peninsula. Of the southern peninsula.

Which is the largest city of Michigan? What can you say of its commerce? What is the importance of Grand Rapids? Of Jackson, and Kalamazoo? Of Saginaw? Of Ann Arbor? Of Lansing? State the facts noted in regard to Wisconsin.

Cities.—*Milwaukee*, on one of the best harbors of Lake Michigan, is the chief commercial centre of the State. It is a great wheat market, and has a large trade in other farm produce, in lumber, and in bricks.

Oshkosh and Fond du Lac, on Winnebago Lake, have steam navigation, by river and canal, to Green Bay and the Mississippi. Oshkosh is a lumber market, and is largely engaged in building barges for the Mississippi River trade. Fond du Lac is a grain market, with extensive flouring mills.

Racine, on Lake Michigan, has a large grain trade and manufacturing of farming machinery.

Madison, delightfully situated between two lakes, is the State capital and the seat of the University of Wisconsin.

VII. MINNESOTA.

Area, 83,500 sq. m. Pop. in 1870, 440,000.

MINNESOTA is the fifth State of the Union in area, but is one of the most sparsely peopled. This State is remarkable for the great number of small, clear lakes scattered over nearly all parts of it.

Cities.—*St. Paul*, at the head of steam navigation on the Mississippi, is the State capital, and the chief centre of trade.

Minneapolis, at St. Anthony's Falls, has immense water-power, and manufactures and ships vast quantities of flour and lumber. It is the seat of the University of Minnesota.

Winona and Red Wing, also on the Mississippi, are important wheat markets. Winona is the seat of the first State Normal School of Minnesota. Stillwater, on St. Croix River, has a large lumber trade.

Duluth, the most western port on the Great Lakes, is the eastern terminus of the Northern Pacific Railroad, which is completed westward as far as the Missouri River.

VIII. IOWA.

Area, 56,400 sq. m. Pop. in 1870, 1,194,000.

IOWA, which consists mostly of rolling prairie-land, is second only to Illinois in the amount of wheat and corn it produces.

The north-eastern part of the State lies in the lead region of the Upper Mississippi. A vast coal-field underlies the middle part of Iowa.

Questions.—What is the largest city of Wisconsin? What can you say of it? Name four other cities of importance in the State. What is the chief business of Oshkosh? Of Fond du Lac and Racine? What is the importance of Madison?

State what is noted in regard to Minnesota. What is the largest city in Minnesota? What can you say of St. Paul? What advantages has Minneapolis, and what is its business? What State institution is located in Minneapolis? What smaller cities are named? What are their leading kinds of business? What is the importance of Duluth? State what is noted in regard to Iowa.



VIEW ON LAKE SUPERIOR.

Cities.—*Davenport*, on the Mississippi, opposite Rock Island, is the most important city on the great thoroughfare connecting Chicago with the Union Pacific Railroad.

Dubuque, on the Mississippi, above Davenport, is the market of the Iowa lead region, the richest part of which is within a few miles of the city.

Burlington and Keokuk, also on the Mississippi, are the chief centres of trade in the south-eastern part of the State.

Council Bluffs, on the Missouri, opposite Omaha, is the eastern terminus of the Union Pacific Railroad, and is the chief market for Western Iowa. Iowa City is the seat of Iowa University.

Des Moines, the capital of the State, in a region rich in coal and timber, has large iron works and other manufactories.

IX. MISSOURI.

Area, 65,300 sq. m. Pop. in 1870, 1,721,000.

SCARCELY any State surpasses Missouri in mineral wealth. Coal-fields un-

Hannibal, on the Mississippi, is the northern terminus of the Missouri, Kansas, and Texas Railroad, and the seat of a large trade in hemp, tobacco, and other produce. A bridge crosses the Mississippi at Hannibal.

St. Charles, near valuable quarries and coal mines, is largely engaged in manufacturing. Springfield is the market for the lead region of Missouri.

Jefferson City, a small town beautifully situated on the right bank of the Missouri River, is the State capital.

X. KANSAS AND NEBRASKA.

Area of Kansas, 81,300 sq. m. Pop. in 1870, 364,000.
" Nebraska, 76,000 " " " 123,000.

BOTH these States are new, consist of prairie land, and are very thinly peopled, except in the eastern part. The western half of each lies in the dry western plains, and is unfit for agriculture except where the soil can be artificially watered. Neither State has any large cities.

Cities.—1. KANSAS.—Leavenworth, on the Missouri River, above



BRIDGE ACROSS THE MISSISSIPPI AT ST. LOUIS.

derlie a large part of the surface. The eastern part of the mountain region is rich in iron, and the western in lead. Pilot Knob and Iron Mountain, southwest of St. Louis, consist almost wholly of iron ore of the richest kind.

Cities.—St. Louis is the most populous city and greatest commercial and manufacturing centre of the Mississippi basin.

The Missouri and Upper Mississippi, meeting a few miles above the city, give it water communication with all the States at the North and North-west; and it is connected by railroad with the great cities on the lakes and the Atlantic and Gulf coasts, and with San Francisco. A magnificent railroad bridge crosses the Mississippi at St. Louis.

Kansas City, on the Missouri, below the mouth of Kansas River, is the greatest commercial centre of the Missouri basin. It is a large live-stock market, and has extensive iron works and establishments for pork packing. The Missouri is bridged at this point.

St. Joseph, on the Missouri, is an important railroad centre, and the chief market in the north-western part of the State.

Questions.—What are the four leading cities of Iowa? What can you say of them? What two other cities are of importance? What can you say of each?

State what is noted in regard to Missouri. What is its largest city? Give an account of St. Louis, and its especial advantages for trade. What can you say of Kansas City? Of St. Joseph?

the mouth of the Kansas, is the chief commercial centre of this State.

Lawrence, on the right bank of Kansas River, contains important manufactories, and is the seat of the State University.

Atchison, on the Missouri, above Leavenworth, is the centre of a considerable river trade.

Topeka, on the Kansas, above Lawrence, is the State capital.

2. NEBRASKA.—Omaha, on the Missouri River, above the mouth of the Platte, is the greatest commercial centre of Nebraska.

Nebraska City, also on the Missouri, has a considerable river trade.

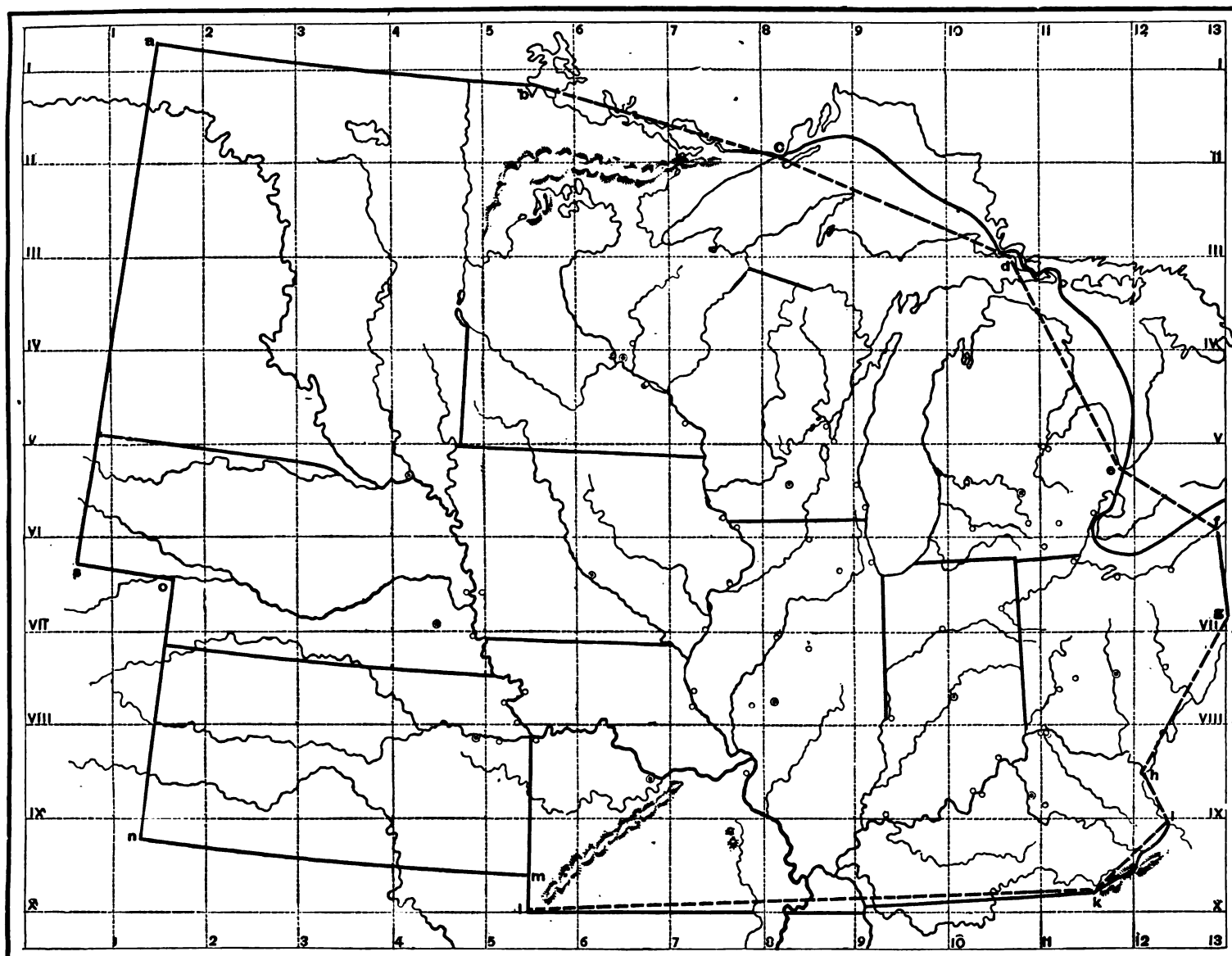
Lincoln, a railroad centre west of Nebraska City, is the State capital.

Questions.—What can you say of Hannibal? Of St. Charles? Of Springfield? Of Jefferson City?

State what is noted in regard to Kansas and Nebraska. What are the chief cities of Kansas? Describe each. Name and describe the cities of Nebraska.

CENTRAL STATES.
TO DRAW THE CENTRAL STATES.

47



Construction Lines.—Draw ten horizontal lines, separated by equal distances, and cross them by thirteen vertical lines, separated by the same distances. Number as in the diagram. *M* = the space separating the lines = 100 miles.

Outlines.—1. Mark the north-west point of Dakota (*a*) at $\frac{1}{2}$ *M* above I, and nearly midway between 2 and 1. Mark the north projection of Minnesota, (*b*) on I, midway between 5 and 6; and draw *a b*.

2. Mark the extreme eastern point of Minnesota (*c*), the Sault St. Mary (*d*), the outlet of Lake Huron (*e*), and the north-eastern point of Ohio (*f*). Draw the north-eastern boundary.

3. Mark the south-eastern point of Ohio (*g*), the extreme southern point (*h*), the eastern point of Kentucky (*i*), and the south-eastern point (*k*). Draw the eastern boundaries of Kentucky and Ohio.

4. Mark the south-western point of Missouri (*j*) on X, midway between 5 and 6, and the south-eastern and south-western points of Kansas (*m* and *n*). Mark the

south-western point of Nebraska (*o*), also mark the angle of its south-west boundary (*o*), and draw the southern and western boundary of the group.

Separation of States.—1. Mark the source of the Mississippi, midway between II and III, and between 5 and 6; also the point where the river leaves this group of States (on X, at $\frac{1}{2}$ *M* to the right of line 8.) Draw the river.

2. Draw the Ohio River. Draw Lake Michigan, and complete the other lakes. Complete the boundaries of the States east of the Mississippi.

3. Draw the Missouri, and complete the boundaries of the States west of the Mississippi.

Exercise on Distances.—How many hundred miles from the eastern boundary of Ohio to the western boundary of Nebraska? How many from the northern boundary of Minnesota to the southern boundary of Missouri? How many hundred miles in length is Lake Michigan from north to south? How many hundred miles in length is Lake Superior from east to west?

CLASS EXERCISE.

(See Note under CLASS EXERCISE on page 27.)

Kentucky.—*Mountains*: Cumberland. *Rivers*: Kentucky, Green, Licking, Cumberland. *Cities*: Louisville, Covington, Newport, Lexington, Paducah, Frankfort.

Ohio.—*Rivers*: Maumee, Miami, Muskingum, Scioto. *Cities*: Cincinnati, Cleveland, Toledo, Columbus, Dayton, Sandusky, Springfield, Hamilton.

Indiana.—*Rivers*: Wabash, White. *Cities*: Indianapolis, Evansville, Fort Wayne, Terre Haute, New Albany, Lafayette, Logansport, Madison.

Illinois.—*Rivers*: Illinois, Kaskaskia. *Cities*: Chicago, Quincy, Peoria, Springfield, Bloomington, Aurora, Rockford, Galesburg, Jacksonville, Galena.

Michigan.—*Rivers*: Grand, St. Joseph, Kalamazoo. *Cities*: Detroit, Grand Rapids, Jackson, Saginaw, Kalamazoo, Ann Arbor, Lansing.

Wisconsin.—*Lakes*: Winnebago. *Rivers*: Wisconsin, Chippewa. *Cities*: Milwaukee, Fond du Lac, Oshkosh, Racine, Madison.

Minnesota.—*Lakes*: Lake of the Woods, Rainy Lake, Itasca. *Rivers*: St. Louis, Mississippi, Minnesota. *Cities*: St. Paul, Minneapolis, Winona, Red Wing, Stillwater, Duluth.

Iowa.—*Rivers*: Des Moines, Iowa. *Cities*: Davenport, Dubuque, Burlington, Keokuk, Des Moines, Council Bluffs.

Missouri.—*Mountains*: Ozark, Iron Mountain, Pilot Knob. *Rivers*: Missouri, Osage. *Cities*: St. Louis, Kansas City, St. Joseph, Hannibal, St. Charles, Springfield, Jefferson City.

Kansas and Nebraska.—*Rivers*: Arkansas, Kansas, Platte. *Cities*: Leavenworth, Lawrence, Atchison, Topeka, Omaha, Nebraska City, Lincoln.

PACIFIC STATES AND HIGHLAND TERRITORIES.

MAP STUDIES.

(FOR MAP DRAWING SEE PAGE 51.)

Position and Outline.—Name the three most easterly Territories of this group. What meridian forms the eastern boundary of Montana and Wyoming? What three Territories lie next west of those named? What two States and what Territory border upon the Pacific? What State lies between California and Utah? Near what meridian are the westernmost points on the coast of the United States?

What cape forms the north-western point of the United States? What cape on the southern part of the Oregon coast? Where is Cape Mendocino? What two bays on the California coast south of Cape Mendocino? Where is Point Conception? What islands south-east of this point? What strait north of Cape Flattery?

How is California bounded? Nevada? Oregon? Colorado? Washington? Idaho? Montana? Wyoming? Utah? New Mexico? Arizona?

General Surface.—What great mountain system in the eastern part of this region? What Territories are crossed by the Rocky Mountains? What high mountains near the Pacific coast? In what State are the Sierra Nevada Mountains? What State and Territory are crossed by the Cascade Mountains? Where are the only extensive low lands in this large division of the United States?

Where is Mount Whitney? * Mount Shasta? Mount Hood? Union Peak? Where are the Blue Mountains? Bitter Root Mountains? Wahsatch Mountains? Uintah Mountains? Pinaleno Mountains?

Drainage.—What three streams rise in the Rocky Mountains, near Union Peak? In what direction does the Snake River flow, and with what stream does it unite? The Green River? The Wind River?

Where does the Missouri rise, and in what direction does it flow? Why do the Wind River and the head waters of the Missouri go to the east and the north, while Green and Snake Rivers go to the south and the west?

What two streams flow eastward from the mountains in the central part of Colorado? What two flow westward from the same region? What one southward? What one northward? On which side of the Rocky Mountains is the upper part of the course of the Rio Grande?

Describe the course of the Rio Colorado; the Gila; the Green; the Rio Grande; the Columbia; the Snake; the Upper Missouri; the Yellowstone.

Where is Great Salt Lake? Pyramid Lake? Where are the Klamath Lakes? Where is Tulare Lake?

Chief Cities.—What great city on the coast of California? What large city at the eastern base of the Rocky Mountains? What important city on the east-

ern shore of San Francisco Bay? What important city near the mouth of Willamette River? What city on the shore of Great Salt Lake? What and where is the capital of California? Oregon? Nevada? Colorado? Washington? Idaho? Montana? Wyoming? Utah? Arizona? New Mexico?

California.—What is the surface of the northern and middle parts of California? What mountains near the Pacific coast? What great chain of mountains east of the Coast Ranges? What high peak in the southern part of the Sierra Nevada? In the northern part? What lies between the Sierra Nevada and the Coast Ranges?

What two rivers drain the great valley west of the Sierra Nevada? In what part of the valley do they unite? Into what do their waters flow? What river enters Monterey Bay? What river drains the mountains in the extreme northern part of the State? Where is San Francisco? Sacramento? Oakland? Stockton? San José? Valejo? Los Angeles?

Oregon.—What great mountain chain crosses Oregon from north to south? On which side of the Cascade Mountains is the larger part of the State? What mountains lie west of the Cascade Range? What is the principal range east of the Cascade? What two high peaks of the Cascade Mountains in the northern part of the State?

What river flows north through the valley at the west of the Cascade Mountains? Into what does the Willamette flow? What river enters the Pacific from the southern part of Oregon? What lakes in the southern part of the State, near the Cascade Mountains?

Describe the location of Portland, Albany, Salem, Oregon City.

Nevada.—What is the surface of the larger part of Nevada? What are the two principal mountain ranges in this State?

What river drains the northern part of the State? Into what does Humboldt River flow? Where is Humboldt Lake situated? What lake west of Humboldt Lake? What lake south of Humboldt Lake?

Describe the location of Virginia City, Carson, Hamilton.

Colorado.—What great mountain system crosses Colorado? On which side of the mountains is the larger part of its area? What high peaks within Colorado?

What large rivers rise in Colorado? Into what stream does each flow? What and where is the capital of Colorado? Where is Central City?

CHARACTERISTICS.

Position.—The Pacific States and all the western Territories, excepting Dakota and the Indian territory, lie in the great Pacific highland region of North America, to the west of the meridian of 102° west longitude.

Dakota and the Indian territory lie in the great central plain, and were studied with the adjacent States.

Surface.—1. REGIONS INCLUDED.—This division of the United States consists almost wholly of lofty plateaus and mountain chains.

It includes the highest portion of the Rocky Mountain system, with the elevated plains at their eastern base; the broadest part of the great plateau west of the Rocky Mountains;

Questions.—In what region do the Pacific States and the western Territories lie? In what region are Dakota and the Indian territory? Of what does this division of the United States consist? What natural regions are included within it?

the whole of the Sierra Nevada, and the highest part of the Cascade Range; and the Coast Ranges near the Pacific.

The broad valleys west of the Sierra Nevada and Cascade Mountains are the only extended low lands in all this division of the United States.

2. The HIGH PLAINS immediately east of the Rocky Mountains have, in the main, a nearly level surface; but low hills of clay or sand cover some portions, and the streams have cut deep channels, called cañons (can'yons) in every direction.

3. The ROCKY MOUNTAINS cover a broad tract of country, including a great number of nearly parallel chains, connected together by numerous cross ranges. Between the parallel chains are broad valleys, which are separated by the cross ranges into a great number of distinct basins.

These basins, surrounded on every side by lofty mountains, and sometimes

Questions.—Where is the only low land of great extent? Describe the high plains. Describe the Rocky Mountain system. Describe the valleys included within the Rocky Mountain system.

containing small clear lakes, are generally very beautiful. In Colorado they are called Parks.

The highest part of the Rocky Mountain system lies in Colorado and Wyoming, where there are many peaks so high that snow and ice remain upon them throughout the year.

4. The PLATEAU, extending from the Rocky Mountains to the Sierra Nevada and Cascade Ranges, is generally quite mountainous; but the mountains do not rise as far above the general level of the country as in the border ranges.

The surface mainly consists of clay or sand; but in the north some portions are of lava which, ages ago, was thrown out from volcanoes and has hardened into rock.

Canyons, deeper than any east of the Rocky Mountains, have been cut through the southern portion of the plateau by the Rio Colorado and its great tributaries.

These canyons have nearly perpendicular sides, between which and the stream there is sometimes a strip of bottom land of considerable breadth.

5. The SIERRA NEVADA AND CASCADE MOUNTAINS consist of one main range, rising on the western margin of the plateau, with a long slope to the low valleys at their western base.

The Sierra Nevada is a continuous chain northward nearly to Mount Shasta; but the Cascade range is broken across by several valleys or gorges through which streams flow to the sea.

The passage of the Columbia, between Mount Hood and Mount Adams, is the most remarkable of these.

In the western slope of the Sierra Nevada is the wonderful Yosemite Valley, a gorge several thousand feet in depth, with nearly perpendicular walls.

Out of this valley the Merced River flows. A small stream, descending into the valley from the mountain-heights at its head, falls in three cascades, one below another, which together have a height of nearly 3,000 feet.

6. The COAST RANGES are low mountains, nearly parallel with the Pacific coast, and much like the Appalachian ranges in form.

Rivers and Lakes.—The rivers of this part of the United States, though so long, afford but a comparatively short distance of navigable water.

The *Rio Colorado* is navigable four hundred miles from its mouth, to the mouth of Virgin River, on the southern boundary of Nevada.

Above this point the Colorado flows along the bottom of a cañon of great

Questions.—Where is the highest part of the system? How high (see page 17, topic "*Natural Regions*") are the highest peaks? Describe the plateau. How have the rivers affected the surface?

Describe the Sierra Nevada and Cascade Mountains. What remarkable valley is in the western slope of the Sierra Nevada? Describe it. Describe the Coast Ranges. To what extent are the rivers navigable? Describe the Rio Colorado.

depth; and even if the stream were not too shallow for navigation, it would be useless, because it is so difficult to reach from the surrounding country.

The *Columbia* is navigable to the Cascade Mountains, one hundred and forty miles from its mouth. It is here obstructed by falls, but above the falls small boats ascend the stream for some distance.

Puget Sound extends for seventy miles into the valley of Washington Territory, and is navigable, throughout its length, for the largest ships.

A large part of the plateau is so enclosed by higher lands, that its streams cannot reach the sea, but flow into salt lakes. These lakes are quite numerous, especially near the mountains which inclose the plateau. Great Salt Lake is the largest.

The Amargosa River flows into a remarkable depression called Death Valley, in Southern California, east of the highest part of the Sierra Nevada. This valley is about forty miles long, and the lowest part of its surface is one hundred feet below the level of the ocean.

Minerals.—Scarcely any region on the globe is richer than this in gold, silver, and quicksilver. Copper, lead, iron, and coal also abound, but little attention has as yet been given to them.

Gold is most abundant in the western slope of the Sierra Nevada, in the mountains of Colorado, and in Montana and Idaho Territories.

Silver is found in the greatest abundance in Nevada, near the Sierra Nevada, and in the eastern part of the State. The southwestern part of Idaho, and the southernmost parts of New Mexico and Arizona, also, are rich in silver.

The richest quicksilver mines are in the Coast Ranges of California, at New Almaden, a little south of San José.

Moisture.—This great highland region is in general quite dry, but plentiful rains fall in the coast region, at the west of the Sierra Nevada and Cascade Mountains, and on the high chains in the interior.

The warm moist wind from the Pacific Ocean, which brings rain to the coast region, is cooled in passing over the high mountains, and the larger part of its vapor is condensed, and falls in rain or snow on the western slopes.

In passing over the plateau the wind is warmed again, and takes up moisture from the lakes and streams instead of giving rain; but in crossing the Rocky Mountains it is once more cooled and gives up its moisture.

Thus, while the surface of the plateau and of the high plains is dry, the mountains rising high above them receive a sufficient supply of rain.

Questions.—Describe the Columbia; Puget Sound. Describe the waters of the inclosed part of the plateau. What remarkable depression in the plateau east of the highest part of the Sierra Nevada? Describe it. Describe the mineral wealth of this part of the U. S. Where is gold most abundant? Where silver? Where quicksilver? What is the condition of the high lands in regard to moisture? Explain why the plateau and high plains are dry, while the coast and the mountains have plentiful rains.



THE GRAND CAÑON OF THE COLORADO.

Scanty rains fall upon the plateau and the high plains in spring and autumn, but in the coast region the rain falls mostly in winter.

Soil.—The valleys west of the Sierra Nevada and Cascade Mountains, and the valleys within the Rocky Mountain system, being plentifully moistened, are highly productive.

The great plateau and the high plains are generally very sterile. The only productive regions are the tracts at the foot of the mountains, moistened by the mountain streams, and the bottom lands of the rivers.

On the high plains the barrenness seems caused entirely by the drought, for wherever the soil has been moistened artificially it has proved fertile.

On the plateau, especially in Utah, Nevada, and South-eastern California, the soil contains salt, soda, potash, or other substances injurious to vegetation.

Vegetation.—1. The HIGH PLAINS are treeless, except on the bottom lands of the rivers; but they yield different kinds of grasses and other plants suitable for pasturage.

The grasses spring up after the rains, and grow rapidly, and the dry air cures them as they stand, making a fine hay, upon which cattle may feed all winter, as there is little snow.

2. The ROCKY MOUNTAINS have fine forests of pine, cedar, fir, and cypress trees on their lower slopes; and many of the inclosed valleys and parks are covered with these trees, while others are beautiful prairies.

Higher up the mountains the trees are fewer and smaller; and still higher, there are only low shrubs, grasses, and other small plants.

3. The PLATEAU is almost destitute of useful plants, except near the mountains which form its borders.

In Utah and Nevada large tracts of country are covered thinly with a stunted woody plant, whose gray foliage, at a little distance, cannot be distinguished from the dry gray soil. This forms the "sage brush" which is mentioned by travellers in that region.

Farther south, great numbers of plants of the cactus kind grow, some of them so large as to seem almost like trees.

That part of the plateau lying north of the Snake and Columbia Rivers has a better soil and more moisture, and contains some prairie land and occasional small forests.

Questions.—In what parts of the year does rain fall on the plateau and the high plains? When do the rains occur in the coast region?

Describe the soil in this portion of the United States. What is the cause of the barrenness of the high plains? What additional cause of barrenness in the plateaus?

Describe the vegetation of the high plains. Of the Rocky Mountains. To what extent do useful plants grow upon the plateau? Describe the vegetation in Utah and Nevada. What is the vegetation farther south? What is the vegetation north of the Snake and Columbia Rivers?

4. The SIERRA NEVADA and Cascade Mountains, and a large part of the country beyond them, are covered with forests.

They are famed for the size and beauty of the trees, especially the pine, fir, and cypress. In California are several groves of the largest trees known, commonly called the "big trees."



BOTTOM OF ONE OF THE "BIG TREES."

Occupations and Productions.—1. PURSUITS.—Upon the plateau, and among the Rocky and Sierra Nevada Mountains, gold and silver mining are almost the only pursuits.

In the great valleys, near the Pacific, agriculture and grazing are largely carried on; and, in California, manufacturing is fast increasing.

Lumbering is an important business in Oregon and in Washington Territory.

2. PRODUCTIONS.—The leading farm-crops are corn, wheat, oats, barley, and a variety of fruits.

3. COMMERCE with the Central and the Atlantic States is carried on by the Pacific Railroad to St. Louis and Chicago. Steamers also ply between San Francisco and Panama, where a railroad crosses the Isthmus, connecting with a line of steamers for New York.

The chief exports are gold, wine, fruit, and large quantities of wheat and butter, from California; silver, from Nevada; and large quantities of lumber from Oregon and Washington Territory. There is little trade from the other Territories.

SEPARATE STATES AND CITIES.

I. CALIFORNIA.

Area, 159,000 sq. m. Pop. in 1870, 560,200.

CALIFORNIA has one of the richest gold fields known. It produces yearly about \$25,000,000 worth of the metal, nearly as much as all the rest of the highland region together.

In the coast regions of Southern California great quantities of fruit are raised. The fruit crop includes all the finest kinds of orchard fruits grown in the Atlantic States, and also the orange, fig, almond, and grape. Great quantities of wine are made in Middle and Southern California.

Cities.—SAN FRANCISCO is the largest city and greatest commercial port on the Pacific coast of North America. It has a large trade with the central and eastern portions of the United States; and has regular lines of steamships to the Sandwich Islands, Japan, China, and Australia.

Questions.—Describe the vegetation of the Sierra Nevada and Cascade Mountains, and the region beyond them.

What is the leading pursuit in the highlands of this region? What pursuits are carried on in the great valleys west of the Sierra Nevada and Cascade Mountains?

What are the chief farm crops? How is the commerce of this region carried on? What are the exports?

State what is noted in regard to California? What is its largest city? Describe San Francisco.

Sacramento, the State capital, is the market for the gold region, and the chief centre of trade for the Sacramento basin. Stockton is the chief market for the San Joaquin basin.

Oakland is the home of a large number of people doing business in San Francisco, and is noted for its fine residences.

Vallejo is the western terminus of the Central Pacific Railroad. San José and Los Angeles are great fruit markets.

II. OREGON.

Area, 95,800 sq. m. Pop. in 1870, 91,000.

That part of OREGON lying west of the Cascade Mountains is noted especially for the extent of its pine and cypress forests, and the height and beauty of the trees. Their trunks are largely exported for masts for shipping.

East of the Cascade Mountains there is little land fit for cultivation or for pasture, except along the streams.

Cities.—The cities are all small, the principal ones being situated in the Willamette Valley. The largest are Portland, the chief centre of trade; Albany, a grain market; Oregon City, a lumber market; and Salem, the State capital.

III. NEVADA.

Area, 104,100 sq. m. Pop. in 1870, 42,000.

NEVADA has scarce any land fit for pasturage or agriculture, and its silver mines are almost its sole wealth. It yields \$12,000,000 worth of silver yearly, about four-fifths of all that is produced in the United States. In Southern Nevada is the richest mine of rock-salt known in the New World.

Cities.—The cities are all small, and are confined to the mining districts.

The largest are Virginia, Gold Hill, and Carson City, in the western mining region within a few miles of each other; and Hamilton, at the White Pine mines, in the eastern part of the State.

Carson City, the capital, is situated in a valley of considerable fertility.

IV. COLORADO.

Area, 105,000 sq. m. Pop. in 1870, 40,000.

COLORADO, authorized in 1875 to form a State constitution, has rich gold mines and coal beds; and valuable timber in the Rocky Mountains.

The valleys inclosed in the mountain system contain a great amount of fine

Questions.—Describe Sacramento. What other cities are named? What can you say of Oakland? Of Vallejo? Of Los Angeles and San José?

State what is noted in regard to Oregon. What is the size and situation of its cities? Name the largest four?

State what is noted in regard to Nevada. What is the size and location of its cities? What and where are the four principal cities of this State? When was Colorado authorized to form a State constitution?

farming and pasture land; and at the foot of the mountains, on each side, is narrow strip of fertile land.

Cities.—*Denver*, the capital, is the largest city between the Missouri River and the Pacific coast. It is the western terminus of the Kansas Pacific Railroad, and is connected with the Union Pacific by a branch terminating at Cheyenne. It is remarkable for the rapidity of its growth. Central City is the market of a rich gold region.

THE TERRITORIES.

EXCEPTING in Utah and Washington, the white inhabitants of the Territories are gathered almost wholly about the mining regions.

The people of Washington are settled mostly in the fertile lands about Puget Sound; and those of Utah in the fertile valley at the western base of the Wahsatch Mountains.

The three northern Territories are the only ones which contain extensive forest regions, or a large amount of naturally productive land.

Washington has the best natural facilities for trade of any of the Territories. Wyoming and Utah are crossed by the Pacific Railroad.

In the north-western part of Wyoming is a wonderful region, about 25 miles square, set apart by Congress for a National Park. It is famous for its lofty mountains, beautiful lakes, deep cañons and picturesque falls; and for the great number of spouting springs, called *geysers*, which it contains.

Cities.—The capitals are the most populous cities in the seven Territories; but none, except Salt Lake City, have more than from three thousand to five thousand inhabitants.

Salt Lake City is the commercial and religious metropolis of the Mormons, who are almost the only inhabitants of Utah. A short branch road connects it with the Pacific Railroad.

The Mormons are a sect calling themselves Latter-Day Saints, and composed of people from many different countries. Brigham Young, a pretended prophet, is their leader.

ALASKA.

THE north-western portion of North America belongs to the United States, and has received the name of Alaska.

Alaska is a cold and barren region, and is almost useless except as a hunting ground for the seal and other fur-bearing animals. It is inhabited mainly by uncivilized Esquimaux and Indians.

Questions.—What can you say of its productions? Of its valleys? What can you say of Denver? What can you say of Central City?

Where are the people of the Territories chiefly located? Where the inhabitants of Washington and Utah? What remarkable region in the northern part of Wyoming? For what famous? What advantages have Washington, Wyoming, and Utah? What are the most populous cities in the Territories? What can you say of Salt Lake City? What are the Mormons? What can you say of Alaska?

COMMERCIAL REVIEW OF THE UNITED STATES.

What important cities (see Map, page 53) would you pass in going by water from Chicago or Duluth to New York? With what would a vessel making this trip from Chicago probably be loaded? Where would her cargo be transhipped?

What would a vessel going down the lakes from Duluth probably carry? One from Milwaukee? One from Saginaw? One from Detroit?

A barge, heavily laden, sails from St. Paul for New Orleans; what does she probably carry, and what large cities will she pass? What important cities on or near the coast would you pass in going from Portland to Galveston? What cargo would you procure in New Orleans for sale in Boston? What cities in Massachusetts and New Hampshire would be most interested in the arrival of a heavy cargo of cotton at Boston?

What large cities would you pass in going by railroad, on the most direct route to Boston to Chicago? From Chicago to San Francisco? From New York to St. Louis? From Philadelphia to Milwaukee? From Baltimore to San Francisco? What way of the Kansas Pacific Railroad? From Cleveland to New Orleans?

What cargo would a vessel sailing from Portland to Charleston, S. C., be likely to carry? One sailing from Boston for New Orleans? What is a freight train going from Cincinnati to Baltimore likely to carry? With what would you load a vessel at New York for London? A ship sails from Detroit, down the lakes and the St. Lawrence, and across the ocean to Liverpool; what does she probably carry? What would you load a vessel at Charleston for New York? At Baltimore, for Cuba? At New Orleans for Liverpool? At Mobile for Providence?

TO DRAW THE PACIFIC STATES.

Construction Lines.—Draw thirteen horizontal lines, separated by equal distances, and cross them by twelve vertical lines, separated by the same distance. M = one space, = 100 miles.

Outlines.—1. Mark Cape Flattery (*a*) at $\frac{1}{2}$ M above I, and $\frac{1}{2}$ M to the left of 1; and the coast of Juan de Fuca Strait (*b*) $\frac{1}{2}$ M above I and midway between 1 and 2. Mark the north-eastern point of Montana (*c*) near 10 and $\frac{3}{4}$ M above I. Draw the northern boundary.

2. Mark the south-eastern point of New Mexico (*i*) on XII, a little to the right of 12. Mark the points *d*, *e*, *f*, and *g*, and draw the eastern boundary.

3. Mark the south-western points of Arizona and California (k and m), and draw the southern boundaries.

4. Mark point Conception (*n*) and Cape Mendocino (*o*), and draw the Pacific coast.

Separation of States.—1. Draw, by the guidance of lines V and VI, the northern boundaries of California, Nevada, Utah, and Colorado.

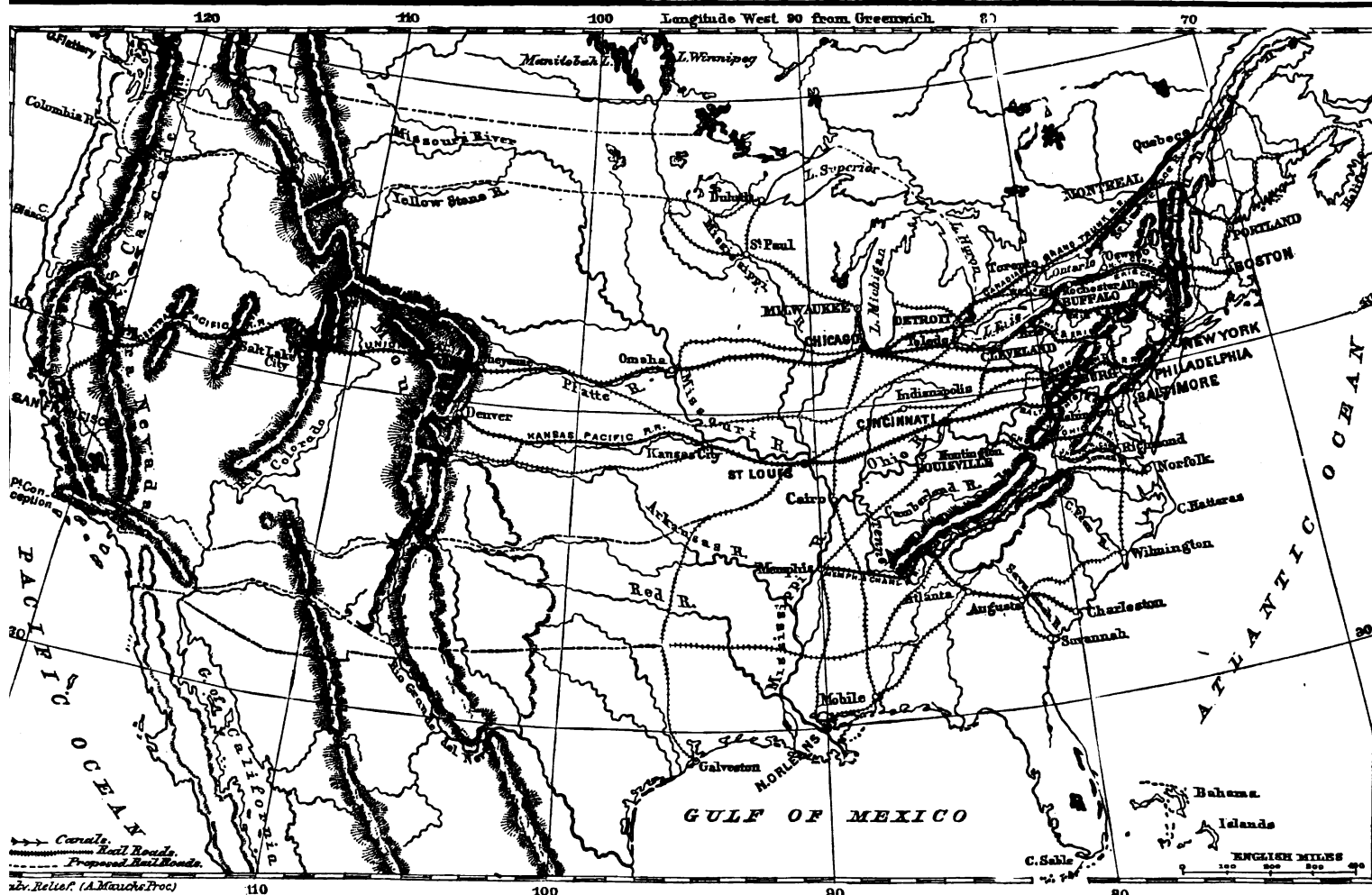
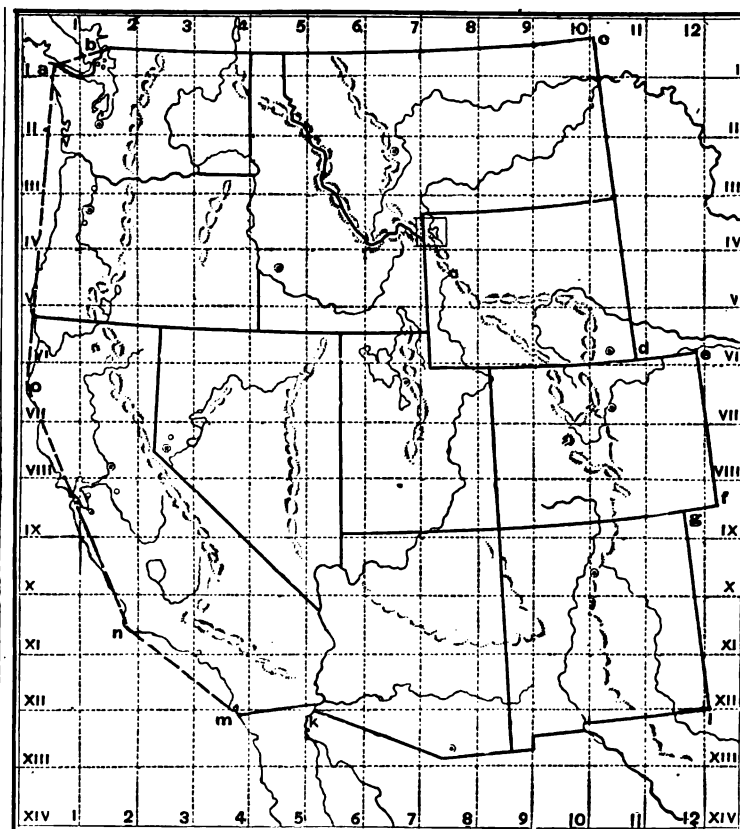
2. Draw the western boundary of Montana (by line 4), Wyoming (by line 7), and Colorado and New Mexico (by 8 and 9). Draw the Colorado River, and complete the boundaries of Utah, Nevada, and Colorado.

3. Draw Snake and Columbia Rivers, and complete the boundaries of Washington, Oregon, Idaho, and Montana.

4. Complete the boundaries of New Mexico and Arizona.

Exercise.—Name and locate the mountain ranges, rivers, and cities marked in the diagram. State the distance, in hundreds of miles, from the northern boundary of Montana to the southern of Arizona. From the eastern boundary of Colorado to Cape Mendocino. From the southern boundary of California to the northern.

NOTE.—Teachers who may desire to draw the United States entire, will find a diagram on page 98.



MAP OF THE CHIEF COMMERCIAL ROUTES IN THE UNITED STATES.



K. Sanzou & J. Rumbold, del.

Entered according to Act of Congress, in the year 1875, by Saxlins, Armstrong & Co, in the Office of the Librarian of Congress, at Washington, D.C.

C.T. No. 4 A 5

MAP STUDIES.

WHAT large island forms the easternmost part of British America? What body of water lies west of Newfoundland? What strait north of Newfoundland? What cape forms the south-eastern point of Newfoundland? What is the capital of Newfoundland? What small town near St. John's?

Where is Cape Breton Island? What peninsula south of Cape Breton Island? What cape forms the southern point of the peninsula? What bay west of Nova Scotia?

What city on the eastern coast of Nova Scotia? What city on the northern coast?

Where is Prince Edward Island? What important town on this island? What province lies next west of Nova Scotia and Prince Edward Island? What river crosses the south-western part of this province? What important city at the mouth of St. John River? What city on the river north-west of St. John?

What great river crosses the province of Quebec? On which side of the St. Lawrence is the larger part of Quebec? What forms the northern boundary of Quebec and Ontario? What river forms the boundary between these two provinces? What great city on the St. Lawrence, near the mouth of the Ottawa? Where is the city of Quebec? Where is the city of Ottawa?

What lakes lie on the boundaries of Ontario? What important city at the western point of Lake Ontario?

Where is Toronto? Kingston? What river crosses the province of Manitoba? What lakes on or near the northern boundary of Manitoba?

Where is the province of British Columbia? What island is included in this province? What river crosses British Columbia?

What important town near the mouth of Fraser River? Where is the city of Victoria?

BRITISH AMERICA.

Area, 3,524,000 sq. m. Pop. 3,888,600.

Position.—British America occupies the main body of the continent to the north of the United States.

It includes the northern slope of the great central plain of North America, the northern portion of the Pacific highland region, and the whole of the Hudson Bay and Mackenzie River systems

Provinces.—Only the southern portion is peopled by civil-

ized man. This is divided into eight Provinces, namely: Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, and British Columbia.

These Provinces, excepting Newfoundland, are all united under one government, forming the *Dominion of Canada*; the capital of which is *Ottawa*. Newfoundland has a separate provincial government.

Questions.—What part of the continent is occupied by British America? What natural regions are included within it? What river systems?

Questions.—What portion alone is peopled by civilized man? How is this portion divided? What do the Provinces together form?

The *government* of the Dominion consists of a Governor-General and Senate appointed by Great Britain, and a House of Commons elected by the people. Each Province has its own Lieutenant-Governor and Legislature.

The middle and northern portion of British America, which belongs to the Dominion, and is designated the *North-west Territory*, is inhabited by Indians, with here and there a small company of trappers or fur-traders. Forests and fur-bearing animals are its chief wealth.

NEWFOUNDLAND is a high, rocky, barren island, with a cold, foggy climate. The inhabitants are confined principally to the coast regions, and almost wholly engaged in the cod, herring, salmon, and seal fisheries.

St. John's is the capital, and the only large town.

Heart's Content is the American terminus of the first telegraph cable laid across the Atlantic.

PRINCE EDWARD ISLAND has a fertile soil, and is well adapted to agriculture, which is the chief pursuit of the people.

Charlotte Town, on a harbor three miles broad, is the capital, and the most populous town of the Province.

NOVA SCOTIA and NEW BRUNSWICK have great natural wealth in forests and minerals, especially coal; but are poorly adapted to agriculture, barely yielding their own supplies of farm produce.

Halifax, the capital of Nova Scotia, has one of the best harbors in the world, and is the chief naval station in British America. Pictou is noted for its coal mines.

St. John, the largest city of New Brunswick, is largely engaged in ship-building, the lumber trade, and the fisheries.

Fredericton, at the head of navigation of the River St. John, is the capital of the Province.

QUEBEC and ONTARIO have a large extent of cultivable land, the plains bordering upon the lakes and the St. Lawrence River being especially productive. Agriculture is the chief pursuit, and wheat and other grains are largely exported.

Questions.—How is the Dominion governed? What is the remainder of British America called? Describe it. Describe Newfoundland. Name the chief towns of Newfoundland. Describe Prince Edward Island. What is the general character of Nova Scotia and New Brunswick? What can you say of Halifax? Pictou? St. John? Fredericton? Describe the provinces of Quebec and Ontario?

MONTREAL, at the head of navigation for ocean steamers, is the most populous city and greatest commercial centre of the Dominion, and one of the greatest grain ports of America.

Quebec is an old fortress, and the seat of a large trade in lumber and furs. It is the capital of the Province of Quebec. *Ottawa*, on a river of the same name, is the capital of the Dominion of Canada.

Toronto, the capital of Ontario, is famous for its educational institutions. Hamilton has a large grain trade. Kingston is the principal naval station on the lakes.

MANITOBA, situated in the basin of the Saskatchewan River, has extensive forests and fertile prairies, but is thinly peopled, and has no towns of importance.

BRITISH COLUMBIA lies west of the Rocky Mountains, and includes Vancouver Island. It is rich in forests, and also in minerals.

Gold abounds in the basin of Frazer River, coal in Vancouver, and copper, lead, and silver in various places.

Victoria, on the south-east shore of Vancouver Island, is

the chief commercial centre of British Columbia.

New Westminster, on Frazer River, is the capital of the Province, and the market of the Frazer River gold region.

DANISH AMERICA.

GREENLAND is believed to be a cluster of islands, with the passages between them filled with ice.

It is so cold as to be nearly uninhabitable, and barley, potatoes, and turnips are almost the only food-plants which can be raised. There are few inhabitants except Esquimaux.

New Herrnhut is the principal European settlement.

ICELAND is somewhat warmer, and more productive than Greenland. It is famous for its volcanoes and geysers.

The inhabitants are mostly of Norwegian descent, and are distinguished for their intelligence and patriotism. Reykjavik is the capital.

Questions.—What can you say of Montreal? Quebec? Ottawa? Toronto? Hamilton? Kingston? Describe the Province of Manitoba? Describe British Columbia? What are the chief towns of British Columbia? Describe Greenland? Describe Iceland?



A SCENE IN THE ARCTIC REGIONS.



MAP STUDIES.

How is Mexico bounded? What peninsula and gulf in the north-western part of Mexico? What peninsula forms the easternmost part of Mexico? What portions of Mexico consist of low land? What two high mountains in the southern part of Mexico?

Where is the city of Mexico? What large city south-west of Mexico, near Orizaba? What two large cities north-west of Mexico? Where is the city of Guadalajara? Zacatecas? Where is the city of Vera Cruz? Acapulco?

In what part of Central America is the State of Honduras? What two States lie farther southward? What States border upon the west of Honduras? Where is the British colony of Belize? Where is the Mosquito coast? Where is the city of Guatemala? San Salvador? San José?

Between what two parallels is the island of Cuba? What three large islands lie a little farther south? What are these four large islands together called? In what direction from Cuba is Hayti? In what direction from Hayti are Jamaica and Porto Rico?

What group of small islands lies north of Cuba and Hayti? What group of small islands lies south-east of Porto Rico? What sea is enclosed by the Greater and Lesser Antilles?

What and where is the capital of Cuba? What important city is on the coast, east of Havana? In what part of Cuba is Santiago? Where is the city of Kingston? Into what two States is the island of Hayti divided?

MEXICO.

Area, 761,500 sq. m. Pop. 9,178,000.

Position.—Mexico occupies that part of North America lying between the Gulf of Mexico and the Pacific, including the highest part of the great Western plateau.

Characteristics.—1. **SURFACE.**—Along the coasts is a narrow plain but little above the sea-level. The interior is a lofty plateau, bordered by mountains, with rugged steep slopes, or descending by terraces, to the coast plains.

In the southern part are many volcanoes, among which are Popocatepetl and Orizaba, the highest peaks in North America.

2. The **MINERAL WEALTH** of Mexico is great, including silver, gold, copper, iron, zinc, and lead. Only the silver mines are much worked.

Questions.—Describe the position of Mexico. Its surface. Its mineral wealth. What mines are chiefly worked?

3. The **CLIMATE** varies with the elevation, from tropical in the coast plains, to cold-temperate in the highest parts of the table-land. The larger portion of the interior, however, resembles the middle and southern portions of the United States in climate and vegetation.

4. **PRODUCTIONS.**—The coast plains have dense forests of tropical trees, and their cultivated lands yield sugar, indigo, and tropical fruits.

The plateaus produce coffee, cotton, tobacco, corn, and other grains.

In some parts there is a kind of cactus, on which the cochineal insect feeds. These insects, when killed and dried, form a valuable dye-stuff, producing a brilliant red.

There is little foreign commerce, the principal exports being indigo, cochineal, and other dye-stuffs.

Questions.—Describe the climate of Mexico. The productions of the coast plains. Of the plateau. What is the extent of commerce? Name the principal exports.

Cities.—The large cities are all situated on the interior plateau, where the climate is much finer than in the coast region.

MEXICO [City of], situated on a high table-land surrounded by mountains, is the capital and chief commercial centre of Mexico.

Puebla, Guadalajara and *Queretaro* are distinguished for their manufactures and fine public buildings.

Guanajuato and *Zacatecas* are in the vicinity of rich silver mines. *Vera Cruz* and *Acapulco* are the chief seaports of Mexico.

Note.—Mexico is a Republic, consisting of twenty-three States, united under a Constitution similar to that of the United States.

At the discovery of America by the Spaniards, the table-land of Mexico was inhabited by a civilized people called *Aztecs*. Their capital, occupying the site of the present city of Mexico, excited the wonder of the Spaniards on account of its noble buildings and vast treasures of silver and gold.

CENTRAL AMERICA.

Area, 188,800 sq. m. Pop. 2,671,000.

Position.—Central America is the narrow portion of the continent lying between the Caribbean Sea and the Pacific.

It includes five independent Republics, namely: *Guatemala, Honduras, San Salvador, Nicaragua* and *Costa Rica*; together with the British colony of *Belize*, or *British Honduras*.

Characteristics.—1. **SURFACE.**—Central America includes the southernmost portion of the Pacific highland region. It is generally mountainous, is highest near the Pacific coast, and contains a large number of volcanoes.

2. **MINERALS.**—Iron is abundant, and gold, silver, and copper also occur, but the mines are little worked.

3. The **CLIMATE** is everywhere tropical, the elevation of the interior not being sufficient to reduce the temperature as in Mexico.

4. The **PRODUCTIONS** are the same as in the warmer lands of Mexico, together with cocoa, from which chocolate is made.

From the forests are obtained different kinds of dye-woods, and mahogany, rosewood, and other woods highly valued for cabinet-work. These, with sugar, coffee, and tobacco are the leading exports.

Cities.—The largest cities are *Guatemala* and *San Salvador*, capitals of States of the same name; and *San José*, the capital of *Costa Rica*. *Leon* is the capital of *Nicaragua*, and *Comayagua* that of *Honduras*.

Questions.—What is the largest city of Mexico? How is it situated? What cities are seats of important manufactures? What cities are in the neighborhood of silver mines? What are the chief seaports?

What government has Mexico? What was the condition of Mexico at the discovery of America?

What is the position of Central America? What are its political divisions? What is the surface of Central America? What is the mineral wealth of Central America? Its climate? Its productions and exports? Its chief cities?

THE WEST INDIES.

Area, 91,658 sq. m. Pop. 4,214,000.

Position.—The West Indies is the general name given to the great archipelago lying between North and South America, and inclosing the Caribbean Sea.

It includes three principal groups, namely: the *Bahama Islands*; the *Greater Antilles*, and the *Lesser Antilles*. The *Greater Antilles* are *Cuba, Hayti, Jamaica*, and *Porto Rico*.

Characteristics.—1. **SURFACE.**—The *Greater* and *Lesser Antilles* are high and mountainous and contain several active volcanoes.

The *Bahama Islands* are quite low and are only from six to ten feet above the level of the sea. They are the highest portions of a vast bank of coral rock which rises, with nearly perpendicular sides, to the bottom of the sea.

2. **MINERALS.**—The *Greater Antilles* have extensive coal beds and copper mines, and small quantities of gold, iron, and lead. The other islands have no minerals of importance.

The *Bark Islands*, in the *Bahamas*, are famous for the production of salt from sea-water.

3. **CLIMATE** is tropical, with an abundance of rain during the summer months, and the vegetation luxuriant.

4. The **PRODUCTIONS** include sugar, coffee, tobacco, indigo, cotton, corn, ginger, and all-spice; and a great variety of delicious fruits. These, with rum, timber and dye-stuffs, are largely exported, both to Europe and the United States.

The banana, bread-fruit, and yam form a large portion of the food of the people. The manioc, from the root of which tapioca is made, is also cultivated.

Cities.—*HAVANA*, on the southern coast of *Cuba*, is the most populous city and chief commercial centre of the West Indies, and is one of the greatest sugar markets of the world.

Next in population and commercial importance are *Santiago* and *Matanzas*, in *Cuba*; and *Kingston*, in *Jamaica*.

Note.—*Cuba* and *Porto Rico* belong to Spain, and *Jamaica* to England. *Hayti* is independent, and is divided into two States, *Hayti* and the *Dominican Republic*.

The *Bahamas* and the larger number of the *Lesser Antilles* belong to Great Britain. A few of the latter belong to France, and a few to Denmark.

Questions.—What is the position of the West Indies? Of what groups does this great archipelago consist? How many, and what are the *Greater Antilles*? Describe the surface of the *Antilles*. Describe the surface of the *Bahamas*. The mineral wealth of the West Indies. What is the climate and vegetation? Name the leading productions and exports. What articles are largely used as food by the people?

What is the chief commercial centre of the West Indies? For what article of trade is it especially noted? Name the three cities next in importance. Who are the possessors of the *Greater Antilles*? Of the *Lesser Antilles* and the *Bahamas*?

CITIES OF NORTH AMERICA REVIEWED.

The largest cities of North America, according to the census of 1870, are the following:

1. Above 500,000—NEW YORK, PHILADELPHIA.

2. Above 200,000—BROOKLYN, ST. LOUIS, CHICAGO, BOSTON, CINCINNATI, BALTIMORE, MEXICO.

3. Above 100,000—HAVANA (*Cuba*), NEW ORLEANS, SAN FRANCISCO, PITTSBURG, BUFFALO, MONTREAL (*Dom. of Canada*), WASHINGTON, NEWARK, LOUISVILLE, CLEVELAND.

4. Above 50,000—Jersey City, Albany, *Puebla* (*Mex.*), Milwaukee, Detroit, Providence, Rochester, Alleghany City, Richmond, New Haven.

5. Above 30,000—Charleston (*S. C.*), Indianapolis (*Ind.*), Troy (*N. Y.*), Toronto (*Dom. of C.*), Syracuse (*N. Y.*), Worcester (*Mass.*), Lowell (*Mass.*), Memphis (*Tenn.*), Guatemala (*Cent. Am.*), Cambridge (*Mass.*), Hartford (*Conn.*), Scranton (*Pa.*), Reading (*Pa.*), Paterson (*N. J.*), Kansas City (*Mo.*), Mobile (*Ala.*), Toledo (*O.*), Portland (*Me.*), Columbus (*O.*), Wilmington (*Del.*), Dayton (*O.*).

EXERCISE.—Name in their order the cities of each of the five classes given above. State in what part of its State or country each is situated, and on what river, lake, or other body of water, and name some fact of interest in regard to it.



SOUTH AMERICA.

MAP STUDIES.

Position.—What parallel crosses South America near the extreme northern points? Near the southern extreme?

What meridian passes near the extreme western points? Where (see map, page 12) does this meridian cross North America? What meridian passes near the easternmost point of South America?

Outline.—What oceans surround South America? What is the general direction of the northern coast? Of the eastern? Of the western?

What is the northernmost point of South America? The westernmost? The southernmost?

What cape is at the angle of the northern and eastern coasts? What sea is at the north of the Isthmus of Panama? What gulf is at the east of Cape Gallinas.

Name the capes and bays between Cape St. Roque and the Rio de la Plata. Name the bays south of the Rio de la Plata.

Where are the islands of Tierra del Fuego? What strait separates Tierra del Fuego from the continent?

What island lies nearly east of the Strait of Magellan? Where is the Gulf of Arica?

Surface.—What great mountain system is near the western coast of South America? Where is the Andes system broadest and highest?

What plateau is between the ranges in this part of the system? What table-land is in the eastern part of the continent?

What portion of the table-land of Brazil is most mountainous? What valuable minerals are found in the middle parts of the table-land? Where is the mountain-land of Guiana?

Rivers.—What great river flows eastward through the northern part of South America? What is the greatest tributary of the Amazon from the south? From the north?

Where are the sources of the main stream and of these great tributaries?

What three large tributaries does the Amazon receive from the table-land of Brazil? Where are their sources?

What large stream flows south through the central plain of South America? What name is given to the broad mouth of the Parana?

What streams from the Andes belong to the system of the Rio de la Plata? What stream flows along the northern margin of the mountain land of Guiana?

How is the upper part of the Orinoco system connected with the Amazon system?

What stream drains the extreme northern part of the Andes?

What large stream from the table-land of Brazil enters the Atlantic south of Cape St. Roque? What lake discharges into the Gulf of Venezuela?

Countries and Cities.—What country occupies all the eastern portion of South America? What rivers form parts of the western boundary of Brazil? What mountains form parts of its northern boundary?

What countries are adjacent to Brazil on the north? On the west? On the south? What portions of Brazil consist of low plains? What and where is the capital of Brazil? Where is Bahia? Recife? San Luis de Maranhão? Para?

How is the Argentine Republic bounded?

What and where is its capital? Where is Tucuman? Cordova?

What country between the Parana and Paraguay Rivers? What and where is its capital? What city in the plains nearly east of Asuncion?

What country includes the extreme southern part of the table-land of Brazil? What and where is its capital?

What three European countries possess the eastern portion of the mountain-land of Guiana? What rivers separate their possessions? What is the chief town in each?

What country includes nearly the whole basin of the Orinoco? What portions of Venezuela are mountainous? What and where is the capital of Venezuela? Where is Valencia? Maracaibo?

What countries are crossed by the Andes Mountains? Of what does the eastern portion of all, except Chili, consist? Which three countries include the highest portions of the system?

Bound the United States of Columbia; Ecuador; Peru; Bolivia; Chili.

What and where is the capital of the United States of Columbia? Where is Popayan? Cartagena? Panama?

What and where is the capital of Ecuador? Where is Guayaquil?

What and where is the capital of Peru? What seaport near Lima? Where is Arequipa? Cuzco? Pasco?

What and where is the capital of Bolivia? Where is La Paz? Potosi? Cochabamba?

What and where is the capital of Chili? What seaport northwest of Santiago?

TO DRAW THE MAP OF SOUTH AMERICA.

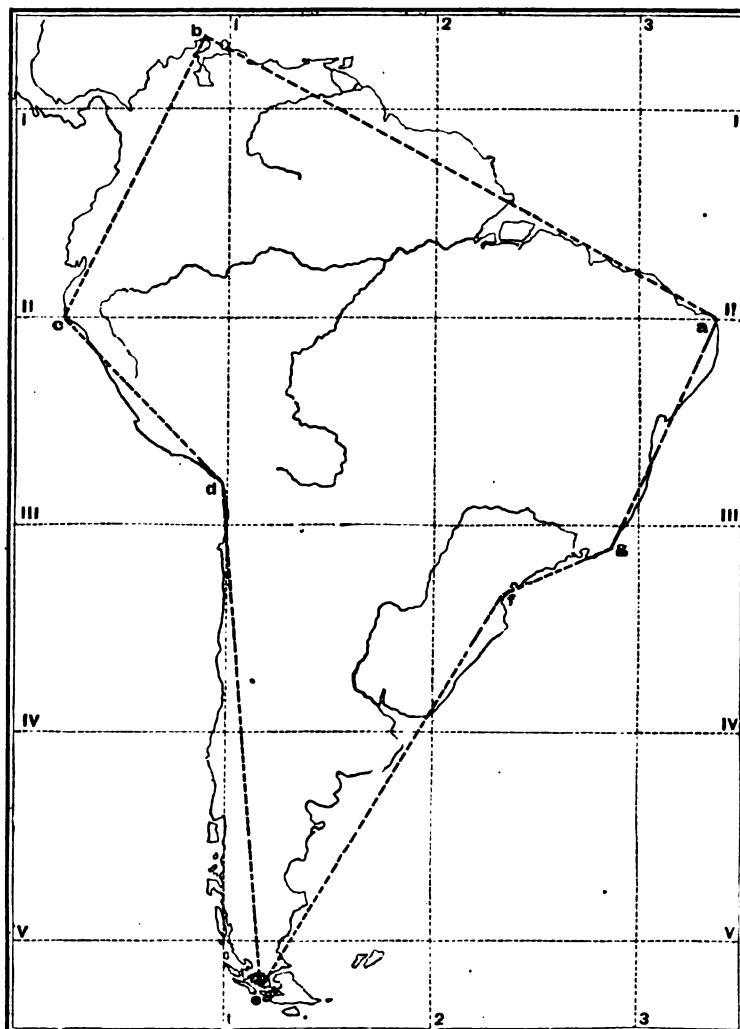
Construction Lines.—Draw five horizontal lines, separated by equal distances; and cross them by four vertical lines, the same distance apart as the horizontal. Number them as in the diagram. M = the space between line = 1,000 miles.

Contour.—Find Cape Gallinas (b) at $\frac{1}{2}$ M above line I, and nearly $\frac{1}{2}$ M to the left line 1. Find Cape St. Roque (a) on line II, at $\frac{1}{2}$ M to the right of line 3. Connect with Cape Gallinas and draw the northern coast.

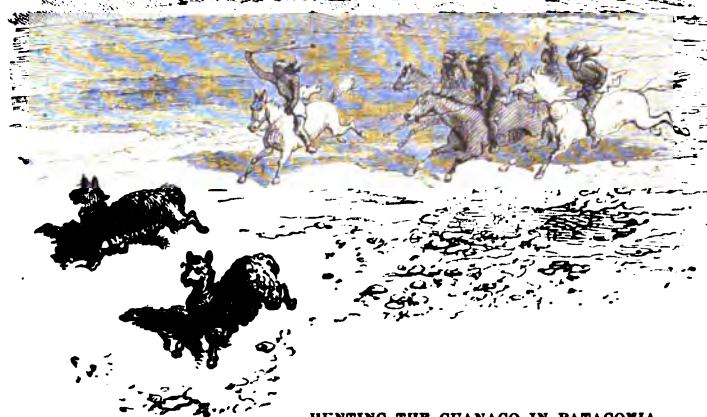
Find Cape Froward (c) at $\frac{1}{2}$ M below line V, and $\frac{1}{2}$ M to the right of line 1. Mark Cape St. Thome (g), the Bay of Paranagua (f), and the Rio de la Plata, a little to the left of line 2 on IV. Draw the eastern coast.

Find the Isthmus of Panama on line I, at $\frac{1}{2}$ M to the left of line 1. Find Punta Aguja (e) on line II, at $\frac{1}{2}$ M to the left of line 1, and the Gulf of Arica (d) on line I, at $\frac{1}{2}$ M above line III. Draw the western coast.

Exercises on Distance.—What is the distance from Cape Gallinas to Cape Froward? From Punta Aguja to Cape St. Roque? From the mouth of the Orinoco to the Rio de la Plata? From Cape St. Thome directly west to the Pacific coast? From the Isthmus of Panama directly east to the Atlantic coast? How much farther south is Cape Horn than the Rio de la Plata?



DESCRIPTION OF SOUTH AMERICA.



HUNTING THE GUANACO IN PATAGONIA.



SCENE ON THE ORINOCO.

The summits of the two ranges are separated by a valley which is divided, by cross ranges, into a large number of distinct basins. The broadest and loftiest of these basins is called the *Plateau of Bolivia*.

In the southern portion of the system there is but a single main range. In the northern portion there are three ranges, and the valleys included are much lower than in the central part of the system.

The **HEIGHT** of the Andes system is greatest in Bolivia. Here the interior plateau is over twelve thousand feet above the sea, and the ranges on each side are about twenty thousand feet high.

The highest part, the Nevado de Sorata, in the eastern range reaches twenty-five thousand feet, or double the height of the plateau. The higher peaks are covered with snow throughout the year.

The **SLOPES** of the Andes are very rugged and broken, so that travelling from the inner valleys to the coast, or to the central plains, is very difficult. In many places the only road is a narrow mule-path, lying along the brink of precipices, where a single false step would be fatal.

The **Table-land of Brazil** extends from the Amazon River to the Rio de la Plata. It is highest near the coast, and slopes gradually towards the interior. Its average elevation is about two thousand five hundred feet, while its mountains are from five thousand to ten thousand feet high.

The surface in general is comparatively level, though the middle part is quite mountainous. Low chains connected together form an irregular water-shed, which extends through this part of the table-land, separating it into a northern and a southern slope.

The **Central Plain**, from the foot of the Andes to its eastern limits, is almost an absolute level. So flat is it between Rio Grande and the upper course of the Paraguay that the waters of these streams meet, in overflowed lands, during rainy season.

I. SURFACE.

Natural Regions.—South America, like North America, is composed of two great highland regions and a vast low plain which occupies all the interior of the continent.

The highlands are the Andes Mountain system on the west, and the table-land of Brazil on the east.

The **Andes** system extends along the Pacific coast, through the entire length of the continent. The greater part consists of two main ranges, connected nearly to their summits, so as to form but one vast wall of elevated land.

Questions.—Of how many, and what natural regions does South America consist? What is the position and extent of the Andes system? Describe the structure of the Andes system.

Questions.—What can you say of the height of the Andes? Describe the slopes. Describe the position of the table-land of Brazil. Its height. Its extent. Describe the central plain.

The smaller mountain region of Guiana rises abruptly from the surrounding plains, between the Amazon and Orinoco Rivers.

II. RIVERS.

Systems.—Nearly all the large streams of South America are included in three great river systems, namely: the Amazon, the La Plata, and the Orinoco system. All discharge their waters into the Atlantic Ocean.

All the great streams overflow in time of high water, converting vast areas of the central plains into lakes or marshes.

Amazon System.—The Amazon, three thousand one hundred miles in length, is one of the longest streams on the globe; and it probably carries to the sea more water than any other river. Its basin includes more than one-third of the area of the continent.

Owing to the flatness of the plain through which it flows, the waters spread over a belt of country many miles wide, forming not a single broad river, but a net-work of streams, which flow on, in different channels, towards the sea.

The branch which enters the sea south of the island of Marajo is fifty miles wide, while that at the north is nearly eighty.

The La Plata System corresponds in position to the Mississippi, of North America. It drains the southern parts of the central plain and eastern highland.

The Orinoco drains the mountain land of Guiana and the northern portion of the central plain.

This system is connected with the Amazon by the Casiquiare, stream which flows from the Upper Orinoco into the Rio Negro, a tributary of the Amazon.

III. CLIMATE.

Temperature.—Nearly the whole of South America lies in the Torrid Zone, and has a very warm climate.

The middle slopes of the Andes, and the valleys between the ranges, owing to their elevation, have a cool and de-

Questions.—How many, and what great river systems has South America? Into what ocean do they all discharge their waters?

What can you say of the length, volume of water, and basin of the Amazon? Describe the river itself. Describe the La Plata system. The Orinoco system. Give an account of the temperature of South America.

lightful temperature, like late spring-time, throughout the year.

The extreme southern part of the continent, surrounded by the cold currents from the Antarctic Ocean, are cooler than would be expected from their latitude.

Moisture.—1. **TROPICAL REGION.**—The middle and northern parts of the continent, as far westward as the Andes, are open to the constant easterly winds of the Torrid Zone, which come laden with vapor from the warm waters of the Atlantic Ocean.

Hence, throughout the tropical region, except on the western slope of the Andes, there is an abundance of moisture at all times. Heavy rains fall during the wet season, and copious dews during the dry season.

The wet season, on either side of the equator, occurs when the sun is vertical on that side, the remainder of the year being rainless, or nearly so.

The high Andes in Peru and Bolivia take the moisture from the easterly wind in its passage over them; and as there is, in that latitude, no westerly wind, no rain falls on the western slope of the Andes of Peru and Bolivia.

North of Punta Parana, the mountains being lower, and the direction of the wind varying more, there is rain on both sides of the Andes.

2. **TEMPERATE REGION.**—South of latitude 30° the wind blows mostly from the west, and is deprived of its

vapor in passing over the Andes eastward.

Hence the western slopes of the Andes of Chili and Patagonia have an abundance of rain, while the plains at the east of the mountains receive very little, and that chiefly in the spring months.

IV. VEGETATION AND ANIMALS.

Selvas.—Almost the entire basin of the Amazon is covered with a dense tropical forest, and is known as the *selvas* (forest).

Questions.—What is the direction of the wind in the tropical region of South America? What is the character of this wind in regard to moisture? What is the effect of the constant sweep of the moist wind over the continent? When does the wet season occur? What is the only part of the tropical region which has a scarcity of moisture? Why is there no rain on the western side of the Andes of Peru and Bolivia? What is the prevailing direction of the wind in the temperate part of the continent? Describe the distribution of moisture in this part. What part of South America is covered with tropical forests?



FOREST ON THE ORINOCO.

plains). Similar forests cover the adjacent parts of the La Plata basin and the mountain land of Guiana.

The selvas surpass almost every other region of the globe in the luxuriance of the forest growth, the abundance of foliage and brilliancy of flowers; and in the endless variety of trees, climbing plants, and undergrowth, which make up the vast forests.

The most numerous trees are the palms, of which there are hundreds of different kinds. Tree ferns, and trees of the banana, fig, and locust or acacia kinds, are also numerous.

Great numbers of useful plants are natives of the selvas. Among these are the mahogany, rosewood, and other valuable timber trees; the cinchona, sarsaparilla and other medicinal plants; the caoutchouc, from whose sap india-rubber is made; the capsicum, or red pepper; the vanilla vine, whose fruit yields the well-known perfume; and a great number of food-producing plants.

The edible productions include the yam, a large tuber which replaces the potato; cassava, from the root of the manioc; the cherimoya, pineapple and many other delicious fruits; the cacao fruit, from which chocolate and cocoa are prepared; the algaroba bean, the fruit of a kind of acacia; and the sap of a tree called the cow-tree, which affords a nutritious drink much like fresh milk.

In the middle and southern parts of the La Plata basin the forests are much less dense, and the wooded lands are separated by rich prairies of vast extent. *El Gran Chaco* (the great hunting-ground) west of the Paraguay, is a part of this region.

Pampas.—From the Rio Salado and Rio de la Plata, southward to the Rio Negro, the plains are treeless except on the borders of the streams. This region is called the *pampas* (fields or open plains).

The pampas yield a heavy growth of tall grass and clover, with thickets of gigantic thistles, from twelve to fifteen feet high. All this vegetation dies to the root during the long summer droughts.

The plains of Patagonia are almost a desert, yielding only coarse grass, which grows in tufts, and stunted prickly bushes.

Llanos.—The plains of the Orinoco are also treeless, except near the streams, and are called *llanos*.

They are covered during the wet season with a luxuriant growth of grass and flowering plants, but in the dry season are parched and bare like a desert.

The Andes, throughout the hot region, have tropical forests on their lower slopes, while the middle slopes and inclosed valleys produce the vegetation of the Temperate Zone. The

Questions.—For what are the selvas remarkable? What are the most numerous trees in these forests? What useful plants are natives of the selvas? What articles of food? What is the vegetation of the middle and southern parts of the La Plata basin?

Where are the Pampas situated? Describe the vegetation of the Pampas; the Patagonian plains. Where are the llanos? Describe the vegetation of the llanos; the vegetation of the Andes.

higher slopes yield only mosses, lichens, and creeping plants like those of the Frigid Zone.

Animals.—The lower orders of the animal kingdom are especially numerous in South America.

Insects, unsurpassed in size and in the brilliancy of their colors, suck the juices of the rank vegetation; and reptiles in wonderful variety inhabit the wet lands, or dwell among the branches of the trees.

The alligator, lizards of enormous size, and the boa constrictor are among the South American reptiles.

Monkeys innumerable, and birds of the most brilliant colors, inhabit the tropical forests; together with the puma and jaguar, and the tapir, an animal somewhat like a small elephant.

The condor, the largest bird of flight known, is found in the high Andes.

The llama, a sure-footed animal, like a small camel, and the alpaca, are also natives of the Andes. They have been domesticated, and are reared for their wool or as beasts of burden.

The guanaco, an animal similar to the llama and alpaca, inhabits the Patagonian plains, and is the favorite game of the natives. (See the picture on page 60.)

V. INHABITANTS.

The Native People of South America are Indians, and they are almost the only inhabitants in a large part of the continent.

The greater number are still in a savage state, but in the coast regions, where they are in contact with more cultivated nations, and along the great rivers, where missionaries among them, they have become partially civilized.

In the Patagonian plains there are Indians of considerable larger stature than the other tribes, who are famous horsemen, spending the greater part of their waking hours on horseback.

The White Inhabitants of Brazil are of Portuguese descent; in the other independent countries they are of Spanish origin. They are confined almost wholly to the coast regions and the elevated valleys among the Andes.

Dutch, French, and British colonies have been established in the eastern half of the mountain-land of Guiana. Patagonia is uninhabited by civilized man.

Governments.—The independent States of South America are all republics, except Brazil.

Brazil is a constitutional monarchy, its sovereign having the title of emperor.

Questions.—What classes of animals are especially numerous in South America? What animals belong more particularly to the forests? What animals are found in the Andes? What animal is found on the Patagonian plains? Who are the native people of South America? What is their condition? Who and where are the white inhabitants? What are the governments of South American countries?

COUNTRIES OF SOUTH AMERICA.

THE EMPIRE OF BRAZIL.

Area, 3,253,000 sq. m. Pop. 10,000,000.

Position.—Brazil occupies the eastern portion of South America, including the larger part of the plain of the Amazon, and almost the entire table-land of Brazil.

Characteristics.—1. **NATURAL WEALTH.**—In regard to natural means of communication, soil, and vegetable productions, Brazil is one of the most favored countries of the earth.

It also possesses rich mines of diamonds, gold, iron, copper, and several other metals and precious stones.

2. **PURSUITS AND PRODUCTIONS.**—Agriculture, gold-mining and the collection of diamonds are the chief pursuits of the people.

Coffee, sugar, cotton, tobacco, corn, and tropical fruits are the leading productions.

3. **COMMERCE.**—Brazil has a large trade, especially with the United States. The chief exports are coffee, sugar, fruits, diamonds; and timber, dye-stuffs and other productions of the forests.

Cities.—RIO JANEIRO, on a beautiful bay, is the capital of the empire, the commercial metropolis of South America, and the greatest coffee market of the world. It also has a large diamond trade.

BAHIA is next to Rio Janeiro in commercial importance, exporting chiefly sugar, cotton, tobacco, rum and hides.

Recife and San Luis de Maranhão have a considerable trade in agricultural produce. Para is the starting point of steamers ascending the Amazon, and is the chief market for the forest products.

Questions.—Describe the position of Brazil. Its natural wealth. What are the chief pursuits and productions? What can you say of the trade of Brazil? What are the chief exports?

Name the largest two cities of Brazil. What can you say of Rio Janeiro? Of Bahia? What three cities are next in importance? What can you say of them?



VIEW OF RIO JANEIRO.

PARAGUAY.

Area, 63,800 sq. m. Pop. 1,000,000.

Position and Characteristics.—Paraguay is situated between the Paraguay and Parana Rivers, within the region of alternate wooded lands and prairies.

The soil and climate are suited to the production of the leading crops of both temperate and tropical regions; but agriculture is neglected, and hardly more than is needed for home supply is produced.

The chief export is maté, the leaf of a native shrub, which is largely used in South America as a substitute for tea.

Cities.—The largest cities are Asunción, the capital, and Villa Rica, the market of a rich tobacco and fruit-growing region.

URUGUAY

Area, 66,700 sq. m. Pop. 300,000.

Position and Characteristics.

—Uruguay occu-

pies the extreme southern part of the table-land of Brazil, and consists of an elevated, rolling, treeless plain.

The rearing of cattle is almost the only pursuit; and hides, horns, tallow and beef are the chief exports.

Cities.—Montevideo, the capital, on a fine harbor, is the great centre of trade, and the only populous city.

ARGENTINE REPUBLIC.

Area, 871,800 sq. m. Pop. 1,812,000.

Position and Characteristics.—The Argentine Republic, composed of several States,—includes the pampas, and the

Questions.—What is the position of Paraguay? The soil and climate? What can you say of its agriculture? What is the chief export of Paraguay? What are the leading cities?

State the position and characteristics of Uruguay. What is its only large city? What regions are included in the Argentine Republic?

prairies and wooded lands in the southern half of the La Plata basin.

Only the north-eastern portion can be cultivated, the pampas being suited only to stock-raising, which is the leading pursuit of the country.

The animals, marked to indicate their owner, are allowed to run wild over the plains, and, when wanted for slaughter, are taken with the lasso.

As in Uruguay, hides, horns, and tallow are almost the only exports.

Cities.—BUENOS AYRES, the capital and chief commercial centre, has a large foreign trade in the produce of the herds, and is the only populous city.

Tucuman is celebrated for the beauty of its surrounding and its fine climate. *Cordova* is noted for its magnificent public buildings, and *Corrientes* for its educational institutions.

BRITISH, FRENCH, AND DUTCH GUIANA.

Total area, 194,700 sq. m. Pop. 288,000.

Position and Characteristics.—These colonies occupy the eastern and less mountainous half of the mountain-land of Guiana. They are distinguished especially for the excessive moisture and the unhealthfulness of their climate, and for their rank tropical vegetation.

Agriculture is carried on in the coast regions. Sugar, coffee, molasses, rum, and the forest products are the chief exports. Cayenne pepper and some other spices are exported from French Guiana.

Cities.—*Georgetown* and *Parimari*, the capitals of British and Dutch Guiana, are the most populous cities and chief centres of trade. Cayenne is the capital and largest town of French Guiana.

VENEZUELA.

Area, 368,200 sq. m. Pop. 1,500,000.

Position and Characteristics.—Venezuela includes the western part of the mountain-land of Guiana, the Llanos of the Orinoco basin, and the extreme north-eastern part of the Andes mountain system.

Gold is found in the highlands bordering upon the lower Orinoco, and copper in the mountains east of Lake Maracaibo.

As in Uruguay and the Argentine Republic, the chief pursuit is cattle-raising, agriculture being impossible on the llanos. The produce of the herds and of the forests are almost the only exports.

Cities.—*Caracas* is the capital and largest city. It is subject to terrific earthquakes, which have several times destroyed a large part of the city.

Valencia and *Maracaibo* are centres of a considerable trade. *La Guayra* is the port of *Caracas*.

Questions.—What is the only cultivable portion of the Republic? What are the exports? Describe the chief city of the Republic. What other cities are named? What can you say of each? State the position of British, Dutch, and French Guiana. For what are they distinguished? What are their exports? Their chief towns?

What regions are included in Venezuela? What mineral wealth has it? What is the chief pursuit? What are the exports? Name and describe the chief cities.

COUNTRIES OF THE ANDES.

| | | | |
|--------------------------|----------------|------|------------|
| U. S. of Columbia, area, | 357,000 sq. m. | Pop. | 3,000,000. |
| Ecuador..... | 219,000 " | " | 1,800,000. |
| Peru..... | 510,000 " | " | 2,500,000. |
| Bolivia..... | 536,000 " | " | 2,000,000. |
| Chili..... | 182,600 " | " | 2,000,000. |

Position.—Columbia, Ecuador, Peru and Bolivia include that part of the Andes system lying in the tropical region, together with the low forest-covered plains at their eastern base. Chili lies on the western slope, in the temperate region.

Characteristics.—1. NATURAL WEALTH.—These countries, in addition to their great natural wealth of vegetable productions, have almost inexhaustible mines of gold, silver and copper, and coal-fields of greater or less extent.

Copper is especially abundant in Chili, and silver and gold in Peru and Bolivia. Immense quantities of guano, a valuable fertilizer, are found on the coasts of Peru, principally in the Chincha Islands.

2. PURSUITS AND PRODUCTIONS.—The chief pursuits are agriculture—in which, however, little skill is displayed—and the raising of sheep, cattle, mules and llamas.

Tropical productions are raised on the coast lands, and on the mountain slopes to the altitude of five thousand feet.

Between five thousand and twelve thousand, the grains, fruits, and crops of the temperate zone are cultivated; but above that altitude the land is valuable only as pasture grounds for sheep and llamas.

3. TRADE.—Excepting Chili and Columbia, these countries have little trade by sea, as there are no means of transporting goods in large quantities from the interior to the coast. They have a considerable commerce with one another, by means of routes connecting the inclosed valleys of the Andes.

The chief exports are wheat and copper from Chili, guano from Peru, and the produce of the herds from Columbia; also cocoa and cinchona, and other medicinal substances, from the mountain forests.

Cities.—In the four tropical States, the large cities, excepting Lima, are all in the inclosed valleys of the Andes, from five thousand to twelve thousand feet above the sea level, where the climate is much finer than on the coast.

I. COLUMBIA.—*Bogota* is the capital and chief commercial centre of the United States of Columbia. *Popayan* was the first city built by Europeans in western South America.

Cartagena is the principal seaport of Columbia. Panama and Aspinwall are the opposite termini of the Panama railroad, which forms part of the coast route from San Francisco to New York.

II. ECUADOR.—*Quito* is the capital and most populous city, and the chief commercial centre, of Ecuador. *Guayaquil* is the principal seaport, and has one of the best harbors on the Pacific coast.

III. PERU.—LIMA, the capital of Peru, is the most populous city.

Questions.—What four countries include the tropical Andes? What country the Andes farther south? Describe the natural wealth of these countries. What are their chief pursuits? What crops are raised? What is the extent of trade? What are the exports?

Where are nearly all the large cities of the Andean States situated? Why? Name and describe the chief cities of Columbia. Of Ecuador. Of Peru.

west of the Andes. It has a considerable trade through the port of Callao. *Arequipa*, situated near the foot of the volcano of *Arequipa*, has valuable mineral waters.

Cusco was the capital of the empire of the Incas, which, at the discovery of America, had its seat in the high valleys of the Andes. It contains the ruins of an Inca palace.

IV. **BOLIVIA.**—*La Paz*, situated in a plateau 12,270 feet above the sea level, is the largest city and chief commercial centre of Bolivia. It exports large quantities of cinchona.

Cochabamba has a considerable trade in agricultural produce. *Sucre* is the capital, and the seat of a University.

Potosi is situated at the foot of a mountain consisting mainly of silver ore, and was once largely engaged in silver mining.

V. **CHILI.**—**SANTIAGO**, the capital and largest city of Chili, is distinguished for the beauty of its situation and its fine public buildings.

Valparaiso, the chief seaport, has a large home and foreign trade.

LARGEST CITIES OF SOUTH AMERICA.

The most populous cities, and greatest commercial emporiums of South America are, in the order of their population, the following:

1. Over 100,000—**RIO JANEIRO**, **BUENOS AYRES**, **LIMA**, **BAHIA** and **SANTIAGO**.

Questions.—Name and describe the chief cities of Bolivia. Of Chili. Name, in the order of their population, the cities of South America with more than 100,000 inhabitants.

2. Over 50,000—*Recife*, *La Paz*, *Valparaiso* and *Quito*.

3. Between 50,000 and 40,000—*Asuncion*, *Caracas*, *Bogota*, *Montevideo*, *Cochabamba* and *San Luiz de Maranhão*.

COMMERCIAL REVIEW OF THE NEW WORLD.

Commercial Countries.—The most commercial countries of the New World are the United States and the Dominion of Canada; the Greater Antilles; and Brazil, the Argentine Republic, and Chili.

The Exports are almost exclusively of raw materials.

They consist of lumber, grain, and tobacco, from the Dominion and the northern and middle portions of the Union; cotton and rice, from the southern States; sugar, coffee, tobacco, fruits, timber and dye-stuffs, from the Antilles and Brazil; hides, horns, tallow and beef, from the Argentine Republic; and wheat and copper from Chili.

Commercial Ports.—The great shipping ports are New York, Boston, Philadelphia, Baltimore, and New Orleans, in the United States; Montreal, in the Dominion; Havana, in the Antilles; Rio Janeiro and Bahia, in Brazil; Buenos Ayres, in the Argentine Republic; and Valparaiso, in Chili.

Questions.—Name the cities of South America between 50,000 and 100,000. Those between 40,000 and 50,000.

Name the most commercial countries of the New World. What is the character of their exports? Name the exports, with the countries whence they come.

What are the great shipping ports of the New World? Describe the location of each, and the route by which its exports would reach the markets of western Europe.

GENERAL REVIEW.

Page (1.) What is Geography? (2.) State the circumference and diameter of the earth. What are the two motions of the earth? What division of time is marked by each? (3.) Define the equator; meridians; parallels; latitude; longitude. What part of the earth's surface is land? Define continents and give their number and names. (4.) Define the smaller divisions of land. Define and name the oceans. Define the different classes of coast waters.

(5.) Define the different kinds of land surface. Describe the general circulation of the water in the air and on the land. Define a river; a tributary stream; a river system; a river basin; a water-shed. What gives a river its direction?

(6.) Define a lake. Define climate. What causes the variations of temperature in different parts of the earth? What are zones? Describe the climate of the Torrid Zone; of the Temperate; of the Frigid.

(7.) What causes the change of seasons? Explain the changes. Explain the varying length of day and night.

(8.) What are the boundaries of the several zones? Describe the vegetation in the different zones. What animals characterize each zone?

(9.) How many and what are the primary races of men? The secondary races? Name and define the different states of society.

(10.) Name and define the different occupations of civilized life. The different forms of government. (11.) Name the great systems of religion. What pursuits give rise to cities? How do they cause cities to grow?

(16.) What three great natural regions make up the continent of North America?

(7.) Describe the Pacific highland; the Atlantic highland; the central plain. Name and state the position of the four great river systems of North America.

(8.) Name the countries of North America.

(19.) What natural regions are included in the United States? (21.) Of what divisions does the United States consist? What are the leading agricultural productions of the United States? Describe the commerce of the United States, both foreign and domestic. Name the chief exports and imports. Name and state the location of the cities of the United States which have above 100,000 inhabitants.

(23.) Describe the government of the United States. Name and give the boundaries and the capital of each of the North Atlantic States.

(24, 25.) Describe the mineral wealth, soil, and leading occupations of New England. Which States take the lead in manufacturing? Which in ship-building, commerce, and the fisheries?

(27.) Name the principal mountain range, river, and lake (if there be any), and the leading cities besides the capital in each of the North Atlantic States.

(29.) Name and give the boundaries and the capital of each of the Middle Atlantic States.

(30.) Describe mineral wealth and soil, and name the leading pursuits and agricul-

tural productions of the Middle Atlantic States. Which States take the lead in mining? In what pursuits does New York excel? Pennsylvania?

(33.) Name the principal mountain range, river, and lake (if there be any), and the principal cities besides the capital in each of the Middle Atlantic States.

(35.) Name and give the boundaries and capital of each of the South Atlantic States; each of the Gulf States; the two most southerly of the Central States.

(36.) What is the character of the soil in general? The mineral wealth? (37.) Name the leading occupations; the agricultural productions; the States which lead in the three main crops. (39.) Name the principal mountain range, river, and lake (if there be any) in each State of the group; and the principal towns besides the capital.

(42.) Name and give the boundaries and capital of each of the Central States. (43.) What is the general surface of the Central States? Their commercial advantages?

(44.) Describe the mineral wealth and soil; and name the leading pursuits and productions. (47.) Name the principal river of each State, and its leading cities besides the capital.

(49.) Name and give the boundaries and capital of each of the Pacific States and Territories. Name the principal mountain-range and river of each State, and the leading cities besides the capital.

(49.) What is the general surface of the Pacific States and Territories? (50, 51.) Describe their mineral wealth, soil, and vegetation. Explain why this half of the United States is generally barren, while the eastern half is generally fertile.

(52.) What are the leading pursuits in the Pacific States and Territories? What means of communication between this region and the east?

(55, 56.) Where is the Dominion of Canada? Name and state the location of the several provinces of the Dominion. Name the principal cities of each. To what country do Greenland and Iceland belong?

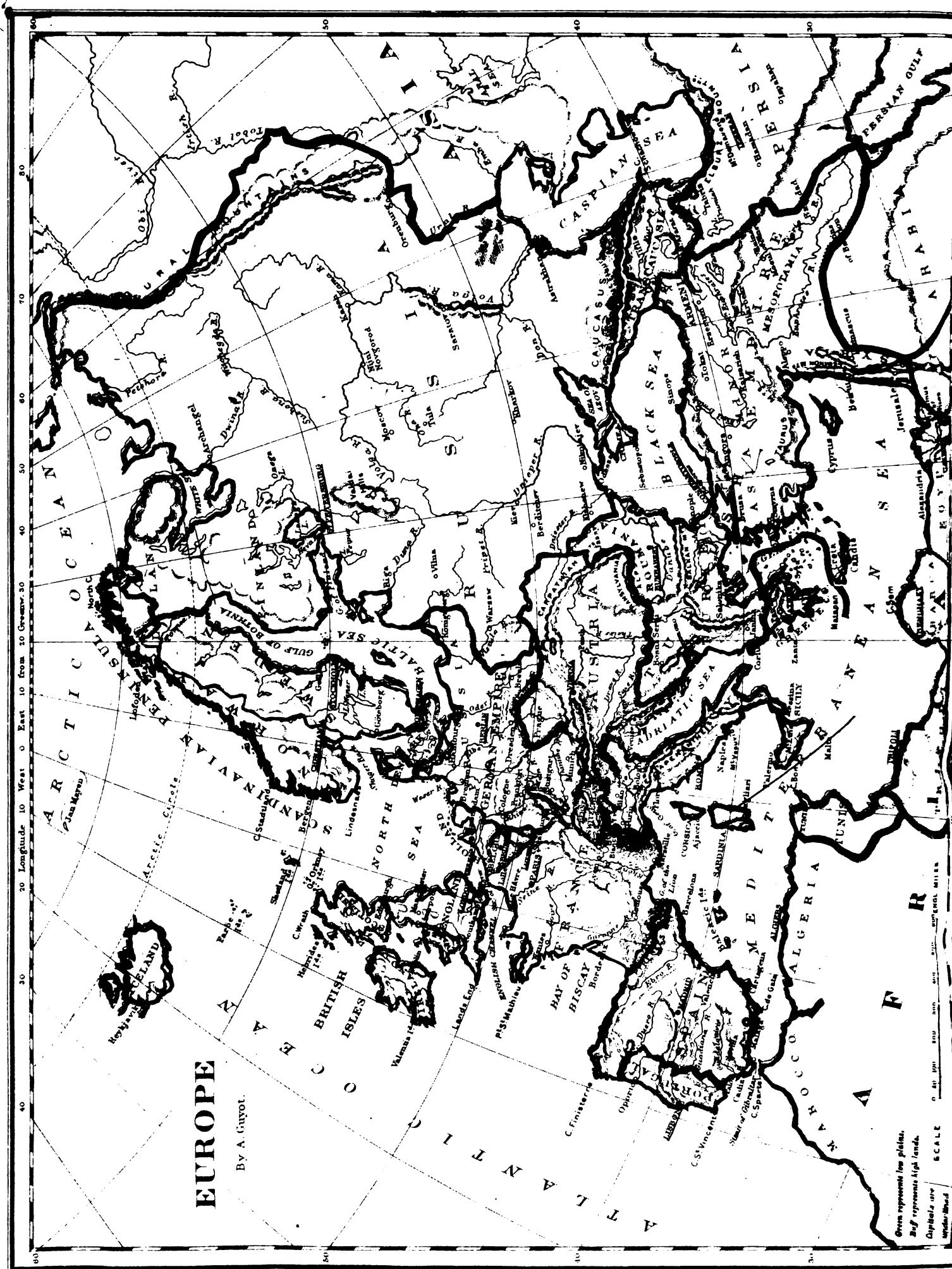
(57.) Describe the mineral wealth, climate, and productions of Mexico. Of Central America. Name the chief cities of each. (57, 58.) Describe the mineral wealth, climate, and production of the West Indies. Name the chief cities.

Describe the location and state the leading interest of each of the cities classified in North America. What is the number in each class? Name them in their order?

(59.) Name and give the boundaries and capitals of the several countries in South America. (60.) What are the natural regions which compose South America?

(61.) Name and describe the great river systems of this continent. Describe the climate of the Selvas. (62.) Describe the Pampas; the Llanos.

(63.) Describe the natural wealth of Brazil; its commerce and exports. Name its chief cities besides the capital. Name the leading pursuits and exports of Uruguay and the Argentine Republic. (64.) Name the chief exports of the Guianas; of Venezuela. Describe the natural wealth of the Andean countries. Describe their trade and exports. Where are their largest cities? Name and describe them.



EUROPE

By A. Guyot.

Green represents low plains.
Buff represents high lands.
Capital cities are marked with a star.

SCALE

0 10 20 30 40 50 60 70 80 90 100 MILES

EUROPE.

MAP STUDIES.

Position.—What parallel crosses the southern peninsulas of Europe? Where (see map, page 15) does this parallel cross North America? Opposite what portion of North America does Europe therefore lie? What parallel passes near the extreme northern part of Europe? Between what two meridians is Europe?

Outline.—What oceans lie north and west of Europe? What great sea on the south? What strait connects the Mediterranean Sea with the Atlantic? What three great peninsulas in Southern Europe? What one in Northern Europe?

What cape forms the extreme northern point of the Continent? The extreme southern point? The extreme western point?

What cape on the western coast of the Scandinavian peninsula? What seas and gulfs separate the Scandinavian peninsula from the main-land? What large group of islands south-west of the Scandinavian peninsula? What waters separate the British Isles from the Continent?

What large bay north of Spain? What group of islands near the eastern coast of Spain? What two large islands west of Italy? What one lies between Italy and the most northern point of Africa?

What sea east of Italy? What sea east of Greece? What two seas south of Eastern Europe? What small peninsula projects into the Black Sea? What cape projects into the Caspian?

Surface.—What portion of Europe consists of a vast low plain? What mountain chain on the east of the great European plain? What two chains on the south of the great plain? What sea and peninsula at the west of the great plain? What slight elevation in the middle part of the great plain? What portion of Europe consists principally of highlands? What great mountain system in the middle part of High Europe? What mountain system in the northern part of the Spanish peninsula? What chain of mountains in the Turkish peninsula south of the Danube? What mountain chain forms the peninsula of Italy?

Rivers and Lakes.—What is the longest river of Eastern Europe? Describe the course of the Volga? What two streams rise a little to the south of the source of the Volga? Describe the course of the Dnieper; of the Duna. What stream enters the Sea of Azov? Describe its course. What stream enters the White Sea? Describe its course. What great river enters the Black Sea from the west? Where is the source of the Danube? Describe its course. What stream from the Alps enters the North Sea? The Mediterranean? The Adriatic Sea? What is the longest stream of the Spanish peninsula? What river of France enters the Bay of Biscay? In what part of Europe are the only large lakes? What two large lakes south of the White Sea?

Countries and Cities.—What country occupies the great plain of Eastern Europe? How is Russia bounded? What and where is its capital? Where is Moscow? Warsaw? Odessa? Kishinev? Riga? Astrakhan? What two countries in the Scandinavian peninsula? What and where are their capitals? Where is Bergen? Göteborg? What small country south of Norway? What and where is its capital? What two small countries south-west of Denmark? What and where are their capitals? What Empire occupies the plains and highlands south of the Baltic Sea? What and where is its capital? What two countries border upon the south of the German Empire? What and where is the capital of Austria? What two countries occupy the peninsula between the Black and Adriatic Seas? What and where is the capital of Turkey? Of Greece? What city of Turkey north-west of Constantinople? What division of Turkey in the plains north of the Lower Danube? What and where is its capital? What State occupies the peninsula to the south of the Alps? What and where is its capital? Where is Naples? Milan? Turin? Florence? Genoa? Venice? Bologna? What two large cities in Sicily? What two countries occupy the Spanish peninsula? What and where are their capitals? Where is Barcelona? Sevilla? Valencia? Malaga? Oporto?

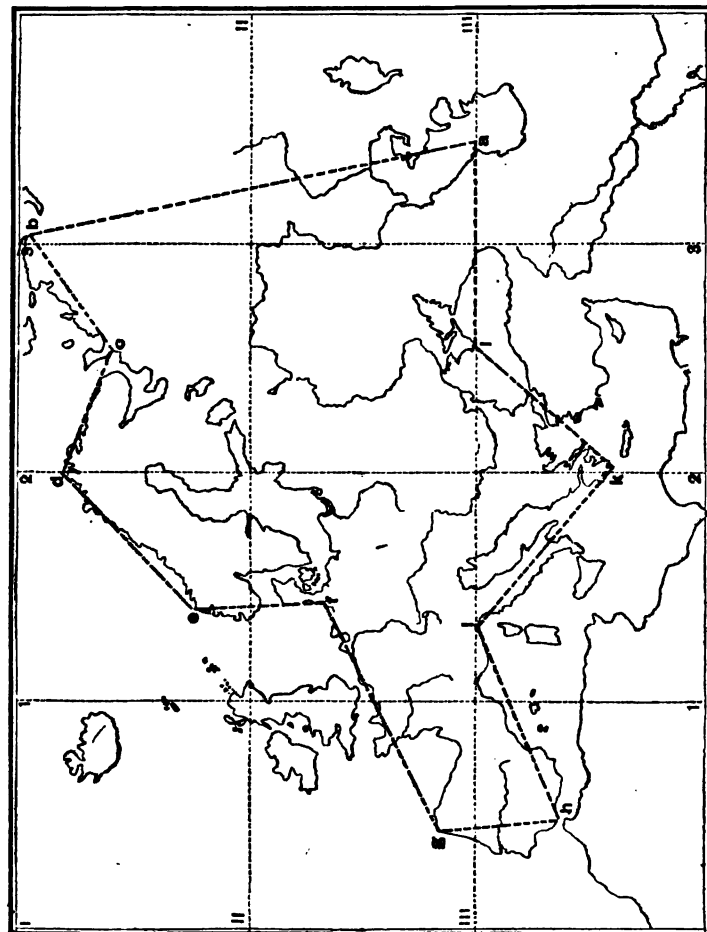
What country lies between the Alps and the Bay of Biscay? What are its boundaries? What and where is the capital of France? Where is Lyon? Marseille? Toulouse? Bordeaux? What countries in the British Isles? What and where is the capital? Where is Liverpool? Manchester? Edinburgh? Dublin?

TO DRAW THE MAP OF EUROPE.

Construction Lines.—Draw three horizontal lines, separated by equal distances, and cross them by four vertical lines the same distance apart as the horizontal. Number them as in the diagram. M = the space separating the lines = 1,000 miles.

Contour.—Find Cape Schachow (a) on line III, and nearly $\frac{1}{2}$ M to the right of line 8. Find Kara Bay (b) a little below line I and to the right of line 3. Draw the eastern boundary. Find the eastern coast of the White Sea (c), North Cape (d), Cape Stadland (e), the mouth of the Weser River (f), Cape Finisterre (g), and the Strait of Gibraltar (h). Draw the northern and western coasts. Find the Gulf of Genoa (i), Cape Matapan (k), and the southern point of the Crimea (l). Connect, and draw the southern coast. Draw the British Isles.

Exercise on Distances.—What is the greatest extent of Europe from east to west? From north to south? How far from the northernmost point of the Gulf of Bothnia to the southern shore of the Baltic? How long is the Black Sea? The Caspian? How far, in a straight line, from the Strait of Gibraltar to the eastern terminus of the Mediterranean?



DESCRIPTION OF EUROPE.



WINTER IN RUSSIA.



SCENE IN SOUTHERN SPAIN.

I. SURFACE.

Contrasting Regions.—Europe consists of two great natural regions, of opposite character, namely: North-eastern or *Low Europe*, and South-western or *High Europe*. A line drawn from the mouth of the Danube to the mouth of the Weser will separate these two regions.

Low Europe is one vast plain, slightly elevated in the centre, and surrounded by alternate highlands and seas.

On the east are the Ural Mountains and the Caspian Sea. On the south are the Caucasus Mountains, the Black Sea, and

Questions.—Of what two contrasting regions does Europe consist? What line marks the boundary between these regions? What is the character of Low Europe?

the Carpathian Mountains. On the west and north are the Baltic Sea, the highlands of the Scandinavian peninsula, and the White Sea.

The Valdai Hills, the highest portion of the plain, are only eleven hundred feet above the sea-level.

High Europe is a grand net-work of mountain ranges, by which nearly the whole surface is cut up into small inclosed plateaus, plains, and valleys. The most extended plains are on the north, bordering upon the Baltic and North Seas.

The principal mountain chains are the Alps, in the middle part of High Europe, the Pyrenees in the west, and the Carpathian and Balkan Mountains in the east.

The ALPS, a wild broken mountain system, from twelve thousand to fifteen thousand feet high, form the great central mass of High Europe. From their base the land slopes, on the north, to the Baltic; on the east, to the Black Sea; on the west, to the Atlantic; and on the south, to the Mediterranean.

High Europe is separated, by its principal valleys and plains, into three great divisions, each of which includes a central mass of mountains and plateaus, and a great peninsula.

The division is made by the broad valleys of the Rhône, the Saône, and the Rhine on the west; and the plain of the Middle Danube on the east.

The middle and main division includes the Alps and the plateaus of Switzerland and Germany, with the peninsula of Italy. The eastern division includes the Transylvanian Alps and plateau, and the Carpathian Mountains with the Turkish peninsula. The western includes the plateaus and mountains of Central France, with the Pyrenees and the Spanish peninsula.

II. RIVERS AND LAKES.

Rivers of Low Europe.—The large rivers of Low Europe all rise in the central part of the great plain, in and around

Questions.—What mountains and seas surround it? What and where is the highest portion? What is the character of High Europe? What are its principal mountain ranges? What forms the central mass of High Europe? In what directions does the land slope from the Alps? Into how many great divisions is High Europe separated? What forms the separation?

What regions are included in the eastern division? The middle division? The western division? Where do the large rivers of Low Europe rise, and into what flow?

the Valdai Hills, and flow into the four seas which surround the plain.

The Volga, entering the Caspian Sea, is the largest river of the continent, its length being about two thousand three hundred miles. The Dnieper, Don, Dwina, and Petchora are between one thousand and twelve hundred miles long.

Rivers of High Europe.—The longest rivers of High Europe rise in and around the Alps, and flow away down the opposite slopes to the surrounding seas, none entering the main ocean basin directly.

The Danube, on the eastern slope, flows into the Black Sea; the Rhine, on the northern slope, enters the North Sea; the Rhône, on the western slope, enters the Mediterranean; and the Po, on the southern slope, enters the Adriatic.

The Danube, eighteen hundred miles in length, is, excepting the Volga, the longest river of Europe.

The Lakes of Europe form two groups, namely, the Alpine group and the Baltic group.

The *Alpine lakes*, occupying narrow basins or chasms among the mountains, are of small size, but often of exceeding depth. The largest are Lakes Constance and Geneva, in Switzerland.

The *Baltic group* lie in the plains around the Baltic Sea. Many are of large size, but all are comparatively shallow. The largest are Lakes Onega and Ladoga, in Russia.

III. CLIMATE, VEGETATION, AND ANIMALS.

Climate of Low Europe.—Low Europe is exposed to cold northerly winds, which sweep over the vast plain with great force, there being no barrier to check their progress.

It has long, severe winters, and short, though often very hot, summers; with only a moderate amount of moisture, especially in the south-eastern portion.

Climate of High Europe.—High Europe is considerably warmer than Low Europe in corresponding latitudes, and the contrast between summer and winter is less severe. The southern peninsulas are almost tropical, rarely having frost or snow, except on the elevations.

The southern peninsulas are swept, through spring and summer, by warm southerly and south-westerly winds; and in winter the force of the northerly winds is broken by the numerous mountain chains at the north, extending in an east-west direction.

Moisture is abundant, especially on the western coasts, which first receive the vapors of the ocean winds.

Questions.—What and how long is the longest river? The four next in length? Where do the longest rivers of High Europe rise, and into what flow? Name the principal stream of each slope. Which, and how long, is the longest?

Describe the lakes of Europe. Describe the climate of Low Europe? How does the climate of High Europe differ from that of Low Europe? Why is High Europe so much warmer than Low Europe? What is its condition in regard to moisture?

Vegetation.—1. The SOUTHERN PENINSULAS, though corresponding with the northern part of the United States in latitude, resemble the South Atlantic and Gulf States in their vegetation.

The larger number of the trees and shrubs retain their foliage throughout the year; and the olive, vine, orange, fig, and almond succeed perfectly.

2. The MIDDLE REGION of the continent has the deciduous forests and hardy grains and fruits of the cold temperate zone, like the Middle Atlantic States and New England.

This region extends from the Alps northward to a line connecting Cape Stadland, the Valdai Hills, and the southern end of the Ural Mountains.

Around the Caspian Sea are vast treeless plains, called *steppes*, resembling in character the pampas of South America. In the plain west of the River Don are rich prairies similar to those of the Mississippi basin.

3. The NORTHERN REGION, including the remainder of the continent, has vast forests of pine, fir, spruce, and other cone-bearing trees. The Arctic coasts are treeless, and bear but a scanty growth of low shrubs, herbage, mosses, and lichens.

Animals.—Wild animals are not numerous in Europe, except in the great forests of the northern region. There are found bears, wolves, deer of different kinds, wild swine, and innumerable smaller animals—as the sable, marten, mink, and fox—whose furs are highly valued.

There are some species of wild oxen in the British Isles and Central Europe, wild goats of several kinds in the Alps, and wild sheep in Corsica.

The reindeer is domesticated in the Arctic region, and furnishes the inhabitants a large part of their subsistence and clothing. Several other species of deer, and the European goat, cat, and swine, have all been domesticated.

IV. INHABITANTS.

The People of Europe, with few exceptions, belong to the white race.

The Khirgis and Kalmucks of the Caspian Steppes, and the Lapps and Finns of the Arctic coasts, are Asiatic peoples, and seem to be a transition between the white and the yellow race.

The Governments of Europe are nearly all constitutional monarchies. Russia and Turkey are absolute monarchies, and France, Switzerland and the German "Free Cities" are republics.

The governments of both France and Spain are in an unsettled condition.

Questions.—Describe the vegetation of the warm southern peninsulas. Of the middle region of the continent. Of the northern region. Describe the animals of Europe.

To what race do the people of Europe mostly belong? What are the exceptions? What forms of government have the States of Europe? What two governments are in an unsettled condition?

COUNTRIES OF EUROPE.

NORWAY AND SWEDEN.

Area, 293,900 sq. m. Pop. 5,921,500.

Position and Characteristics.—These two countries, united under one sovereign, occupy the Scandinavian peninsula.

They are cold, and have but little cultivable soil; but are rich in forests of pine and fir trees, fisheries, and mines of silver, iron, and copper.

The foreign trade is considerable, the leading exports being iron from Sweden, copper from Norway, ice, fish, lumber, and masts for vessels.

Cities.—**STOCKHOLM** is the capital of the United Kingdom, and the seat of its chief scientific institutions. **Göteborg** is an important commercial port, the terminus of an inland water route to Stockholm.

Christiania is the capital of Norway, and **Bergen**, noted for its trade in fish, is the leading commercial port of that country.

RUSSIA.

Area, 2,050,000 sq. m. Pop. 68,000,000.

Position and Characteristics.—1. **ADVANTAGES.**—Russia includes the whole of Low Europe, excepting the narrow region west of the Baltic Sea; and all the longest rivers of the continent, excepting the Danube.

It has vast forests, abounding in fur-bearing animals; rich prairies, admirably fitted for grain-growing; extensive steppes, suited to stock-raising; and an abundance of valuable minerals.

2. **PRODUCTIONS.**—Wheat and other grains, hemp, and flax are the principal crops cultivated. Immense herds of horses, cattle, sheep, and goats are raised on the steppes and prairies.

3. **COMMERCE.**—The commerce of Russia is large, the inland trade being carried on mostly by fairs. Wheat, flax, hides, tallow, furs, timber, and iron are the leading exports.

The principal fair is held annually at Nijni Novgorod, a small city on the Volga, to which merchandise is brought from all parts of both Europe and Asia.

Cities.—**ST. PETERSBURG**, situated on a number of islands in the Neva River, is the capital of the Russian Empire, and is one of the most populous and imposing cities of Europe.

Moscow was the ancient capital, and the sovereigns are still crowned there. It is the chief manufacturing centre of Russia.

Questions.—State the position and characteristics of the Kingdom of Norway and Sweden. What can you say of its commerce? Name and describe the largest cities of Sweden. Of Norway.

Describe the position and natural advantages of Russia? What are its chief productions? What is the extent of its commerce, and how is it carried on? What are the exports? Where is the principal fair held?

Name the largest five cities (see foot-note on page 25) of Russia. What can you say in regard to St. Petersburg? Moscow?

WARSAW was the capital of the former kingdom of Poland, a part of which now belongs to Russia.

ODESSA is the greatest grain market of the Russian Empire. **KISHENEV** ships to Odessa an immense amount of farm produce.

Riga and **Saratov** are large grain and lumber markets. **Astrakhan**, the largest European port on the Caspian Sea, is famed for the great number of nations represented in its population.

Russian Empire.—Russia and the great plains of Northern and North-western Asia, with the region south of the Caucasus Mountains, together form the Russian Empire.

This is one of the largest empires on the globe, being more than twice as large as the continent of Europe. The Asiatic portion has but a sparse population, and a low grade of civilization. (*Area, 8,004,000 sq. m. Pop. 82,000,000.*)

TURKEY IN EUROPE.

Area, 300,000 sq. m. Pop. 16,480,000.

Position and Characteristics.—European Turkey lies between the Black Sea and the Adriatic, extending northward to the Transylvanian Alps and the river Pruth.

This is one of the richest countries of Europe in minerals, forests, and agricultural lands; but, except in the principality of Roumania, north of the Danube, all these sources of wealth are greatly neglected.

Roumania has a large trade, exporting grain, wines, and dried fruits. Wool, morocco, raw silk, tobacco, perfumery, and rhubarb and other drugs, are the chief exports from the rest of Turkey.

Cities.—**CONSTANTINOPLE**, the capital of the Turkish Empire, is the second city of continental Europe in population. It is celebrated for its fine position, beautiful harbor, and imposing appearance.

ADRIANOPLE is the chief centre of commerce and manufacturing in Turkey proper.

BUKHAREST is the capital and commercial metropolis of Roumania. **Jassy** is the entrepôt of the trade of Russia and Austria with Turkey proper.

Turkish Empire.—European Turkey, Asiatic Turkey, and the Islands of Crete and Cyprus, with Egypt, Tripoli, and Tunis, in Africa, together form the Turkish Empire.

Egypt, however, is really a sovereign State, subject to the Sultan only in name; Tunis is only a tributary State. The total area of the Empire is 1,220,000 square miles, and its population 38,000,000.

Questions.—What can you say of Warsaw? Odessa? Kishenev? What smaller cities of Russia are mentioned, and what is the importance of each? What constitutes the Russian Empire? State its extent and population?

What is the position of European Turkey? What can you say of its natural wealth? What portion is most advanced? What are its exports? What are the exports of Turkey proper? Name the largest three cities of Turkey. What can you say of Constantinople? Of Adrianople? Of Bukharest? Of Jassy? What forms the Turkish Empire? What is the relation of Egypt and Tunis to it?

GREECE.

Area, 19,350 sq. m. Pop. 1,457,900.

Position and Characteristics.—Greece occupies the southern part of the Turkish peninsula and the adjacent islands.

It is a mountainous country, deeply penetrated by arms of the sea; and is celebrated for its delightful climate, the beauty of its scenery, and the numerous magnificent ruins of ancient cities which it possesses.

The Greeks are a brave and adventurous people, are admirable sailors, and are the most commercial nation of the Mediterranean shores.

They export dried fruits, raw silk, olives and olive-oil, from their own fertile valleys and islands; and carry the larger part of the merchandise exchanged between the other countries on the Mediterranean.

Cities.—*Athens*, the capital, is surrounded by the ruins of the ancient Athens—the most magnificent city of ancient Greece.

Syra, on an island of the same name, is the great centre of steam navigation in the eastern Mediterranean.

ITALY.

Area, 114,300 sq. m. Pop. 26,716,800.

Position and Characteristics.—The Italian peninsula and the islands of Sicily and Sardinia form the Kingdom of Italy.

Nearly the entire surface is mountainous, and the kingdom contains two of the most famous volcanoes in the world, namely: *Ætna*, in Sicily, and *Vesuvius*, near the city of Naples.

In the year 79 A.D., two large cities, Herculaneum and Pompeii, were entirely buried by substances thrown out by *Vesuvius*, and their site was discovered only within the past century.

Italy is famous for its clear sunny sky, its delightful climate and delicious fruits; its vast quarries of the most beautiful marbles; and its large number of populous cities, adorned with magnificent public buildings, and enriched by the most valuable libraries, and the choicest collections of paintings, sculptures, and other works of art.

Italy produces more silk than any other country of Europe; together with rice and other grains, the olive and vine, hemp, flax, and a great variety of fruits.

The trade is considerable, the leading exports being olive-oil, fruits, marbles; and the manufactures of the country, especially silks, velvets, linens, jewelry, and braided straw for hats.

Cities.—*NAPLES*, *GENOA*, *VENICE*, *PALERMO* and *MESSINA* are the great centres of foreign trade in Italy.

NAPLES, the most populous and commercial city of Italy, is celebrated for its museum of objects taken from the buried city of Pompeii.

VENICE is renowned for the beauty of its situation, on seventy-two small islands in the Adriatic, and for its former wealth, power and splendor.

GENOA is the commercial metropolis of northern Italy, and the outlet for the trade of Switzerland.

PALERMO and *MESSINA*, on the island of Sicily, are great fruit markets.

Questions.—What can you say of the position and characteristics of Greece? What is the character of the people? Describe the commerce in which they are engaged. What is the most celebrated city of Greece? Why? What is the importance of *Syra*? What forms the Kingdom of Italy? Describe its surface. What do you believe two of its ancient cities? For what is Italy famous? What are the productions of Italy? Its exports? What are the five great commercial centres of Italy? For what is Naples celebrated? Venice? What can you say of Genoa? Of Palermo and Messina?

MILAN is the greatest silk market, and the chief centre of the book-trade in Italy.

ROME is the capital of the kingdom, and the residence of the Pope, the head of the Roman Catholic Church. It is renowned for its stupendous ruins of ancient structures.

TURIN was the capital of the former kingdom of Sardinia, whose sovereign is now King of Italy.

FLORENCE, the former capital of Italy, is one of the richest of its cities in collections of paintings and sculptures, and is resorted to for study by artists from all parts of Europe and the United States.

BOLOGNA is the seat of the oldest university of Italy.

SPAIN.

Area, 195,755 sq. m. Pop. 16,642,000.

Position and Characteristics.—Spain occupies the main body of the Spanish peninsula. It consists of a plateau of considerable height, with a number of parallel mountain ranges, separated by broad valleys, and descending to the south-west. The whole peninsula is rich in minerals.

The central plateau, which has a scarcity of moisture, is barren and suited only to pasturage; but the mountains bear valuable forests, in which the cork-oak is found, and the valleys are highly fertile, producing the mulberry, olive, vine, and a great variety of delicious fruits.

Spain is one of the leading silk, wool, and wine-growing countries of Europe. The chief exports are silk and wool, olive-oil, cork, wines, and raisins and other fruits.

Cities.—*MADRID*, on the central plateau, is the capital of Spain, and the seat of its most celebrated University. *BARCELONA* is the chief seaport and greatest commercial centre of Spain.

VALENCIA has extensive manufactures of silk and linen. *SEVILLA* is a great fruit market.

Malaga, a famous wine and fruit market, has the largest iron works of Spain. *Cadiz* is the chief centre of trade with the foreign possessions.

Palos is famous as the place from which Columbus sailed to America on his first voyage of discovery.

Note.—Cuba and Porto Rico in the West Indies, and the Philippine Islands in the East Indies, with numerous smaller possessions, belong to Spain.

The government is unsettled, and the country has long been distracted by a civil war.

PORTUGAL.

Area, 34,494 sq. m. Pop. 3,985,300.

Position and Characteristics.—Portugal occupies a narrow region on the western coast of the Spanish peninsula, and greatly resembles Spain in surface, climate, and productions.

Cities.—*LISBON* is the capital and the chief centre of commerce and manufacturing. *Oporto* is a great wine market.

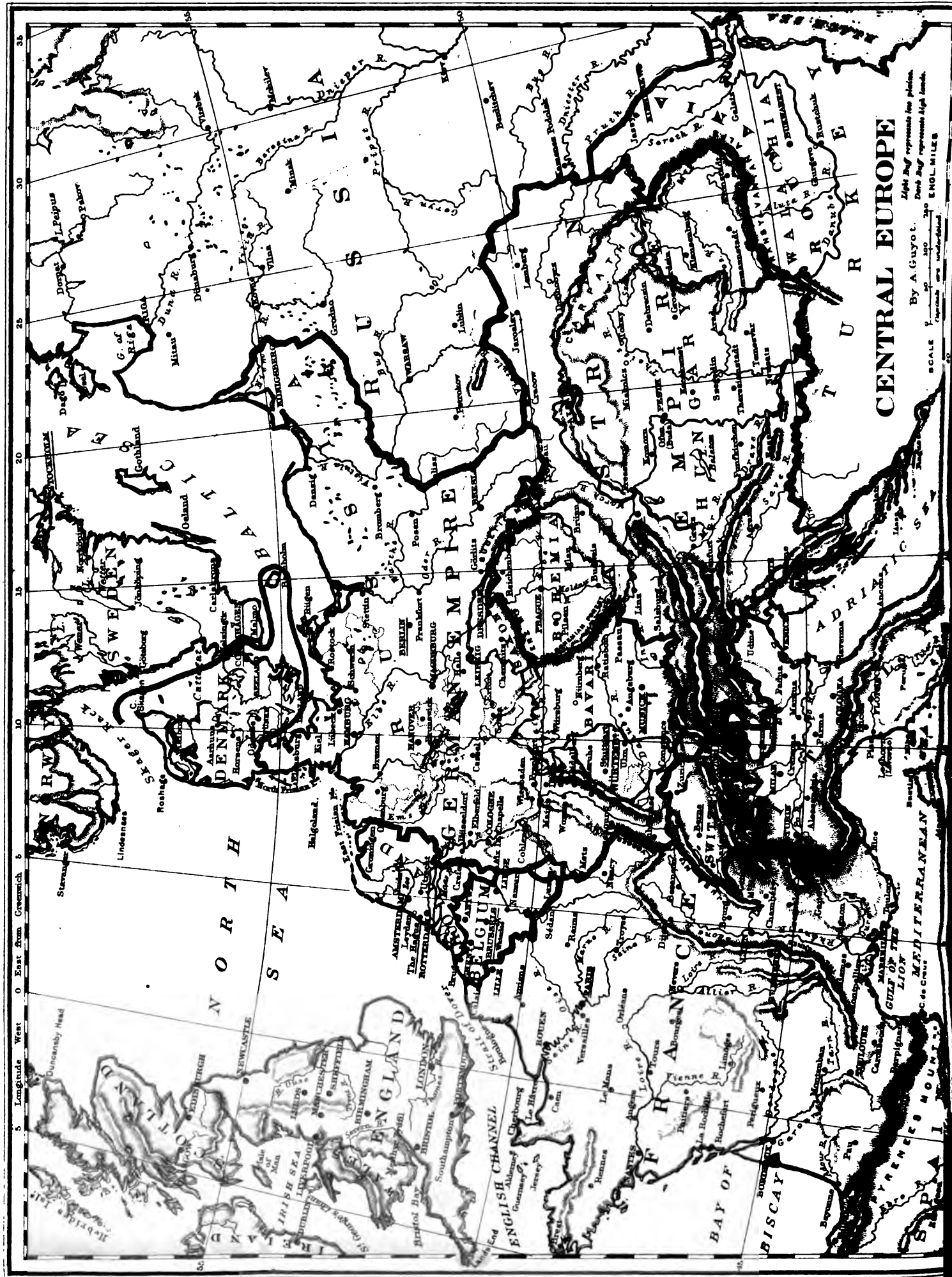
Note.—Portugal has large possessions on the coasts of Africa, and trading ports in India and other parts of tropical Asia.

Questions.—Name the five other great cities of Italy. Describe each.

Of what does Spain consist? How does the plateau region differ from that which consists of mountain-chains and valleys? For what productions is Spain especially distinguished? What are its exports?

Name and describe the four leading cities of Spain. What can you say of Malaga? Of Cadiz? Of Palos? What foreign possessions has Spain?

Where is Portugal, and what is its character? Describe its two chief cities. What foreign possessions has Portugal?



CENTRAL EUROPE

By A. Guyot.
Light Shading represents low plains.
Dark Shading represents high lands.

SCALE 1:100,000

ENGL. MILES

Between what bodies of water is Denmark situated? What is the largest of the islands of Denmark? What and where is the capital of Denmark?

How is Holland bounded? What bay on the coast? What large river crosses Holland? What is the capital of Holland? Describe the location of Amsterdam; of Rotterdam.

Great city of Belgium bounded? What is its capital? In what part of Belgium is Brussels? What part of Belgium is nearly north of Brussels? Where is Ghent? Liege?

How is the German Empire bounded? What part of the Empire consists of low plains? In what part of the Empire is Prussia? Saxony? Bavaria? Wurtemberg? What two large rivers of the German Empire enter the Baltic? What large river crosses the south-western part of the Empire? What two rivers enter the North Sea east of the Rhine?

What and where is the capital of the German Empire? What great city in the south-eastern part of Prussia? What great city in North-eastern Prussia, on the Baltic? Where is the city of Danzig? Cologne? Hanover? Magdeburg?

What great city in the southern part of Bavaria? What two great cities in Saxony? What great city on the lower course of the Elbe River? What great city of the German Empire on the lower course of the Rhine? Where is the city of Strasbourg?

DENMARK.

Area, 14,753 sq. m. Pop. 1,764,700.

Position and Characteristics.—Denmark occupies the large islands, and the northern part of the peninsula, at the entrance to the Baltic Sea.

This country has no minerals of value, few forests, and little cultivable land, except on the islands. The peninsula, though sandy, is well adapted to stock-raising, and the fisheries of the adjacent seas are highly productive.

Denmark, formerly a commercial country, now has no trade of importance.

Cities.—COPENHAGEN, on the Island of Seeland, is the capital, and the only large city of Denmark. It was formerly an important commercial centre.

HOLLAND.

Area, 12,680 sq. m. Pop. 3,688,300.

Position and Characteristics.—Holland occupies the low plains about the mouth of the Rhine.

A considerable part of the surface lies below the level of the sea and river, and is protected from inundation only by vast walls of earth called *dikes*. It is threaded in every direction by canals, which drain the lands and serve as the highways of the country.

The trade of Holland is immense, and is the chief source of its wealth. The exports are manufactures and dairy-produce; and sugar, coffee, spices, and other articles produced by its tropical possessions.

Dutch Guiana, and most of the East Indian Islands, belong to Holland.

Cities.—AMSTERDAM is the commercial metropolis of the kingdom, is largely

Questions.—What constitutes Denmark? Describe this country. Describe its chief city. Describe the position and surface of Holland. Describe its trade. Name its foreign possessions.

How is the Austrian Empire bounded? What mountains in the northern and eastern parts of it? In the south-western part? What part of this Empire consists of low plains? What great river crosses it? In what part of the Empire is the kingdom of Hungary?

What and where is the capital of the Austrian Empire? What city of the Empire at the head of the Adriatic Sea? What great city north-west of Vienna, on the Elbe? What great city of Hungary on the Danube? Where is the city of Segedin? Where is Theresienstadt?

What country includes the middle part of the Alps? How is Switzerland bounded? What lake in the south-western part of Switzerland? What lake in the north-eastern part? What and where is the capital of Switzerland? Where is the city of Geneva? Zurich?

How is France bounded? What portion of France consists of low plains? What mountains in the south-eastern part? What river drains the valley west of the Alps? Into what does it flow? What large rivers of France enter the Bay of Biscay? What one enters the English Channel?

What and where is the capital of France? What great city on the Rhône River? What great city on the Mediterranean coast? What two great cities on the Garonne River? What great city on the Seine, north-west of Paris? What great city of France near the boundary of Belgium? What great city on the lower course of the Loire? Where is St. Etienne? Brest? Toulon? Le Havre?

engaged in ship-building, and is famous for the extent to which the business of diamond-cutting is carried on in the city.

ROTTERDAM is the second city in population and commercial importance. *The Hague*, famous for its museums and beautiful palaces, is the capital of Holland.

BELGIUM.

Area, 11,373 sq. m. Pop. 5,021,300.

Position and Characteristics.—Belgium consists of the plains and highlands immediately south of Holland. The plains are exceedingly fertile; and the highlands are rich in forests and minerals,—coal, iron, copper, and zinc being abundant.

The manufactures are the great source of wealth, Belgium being one of the first manufacturing States of Europe. The chief manufactures are woollen cloths, silks, linens, carpets, laces, leather, machinery, cutlery, and fire-arms. These form the leading exports of the country.

Cities.—BRUSSELS, the capital of the kingdom, is celebrated for its manufactures of lace and carpets, and for its literary institutions.

ANTWERP is the commercial metropolis of Belgium. GHEENT has extensive manufactures of cotton and linen goods; and LIÈGE, of fire-arms and machinery.

THE GERMAN EMPIRE.

Area, 308,630 sq. m. Pop. 41,063,100.

Position and Divisions.—The German Empire occupies the plains south of the Baltic, and the larger part of the highland region lying at the north of the Alps.

Questions.—Name and describe the largest two cities of Holland. What is its capital? Describe the position, soil, and mineral wealth of the Kingdom of Belgium. What is the leading pursuit of the people? What are the principal manufactures? Name and describe the largest four cities of Belgium? What regions are occupied by the German Empire?

It consists of four kingdoms,—namely: Prussia, Saxony, Bavaria and Württemberg,—with twenty-two smaller States, and two imperial provinces.

Three of the States are republics, each consisting of a single city with its suburbs. They are called "Free Cities."

Prussia is larger and more populous than all the other states and provinces taken together, and represents the Empire in its relations with foreign nations. Prussia includes the plains south of the Baltic, and the highlands on the Lower Rhine.

Characteristics.—1. **SOIL AND MINERALS.**—The plains, though in some portions sandy, are generally cultivable.

The highlands are rich in minerals, forests, and pasture grounds, with large areas of cultivable land in the valleys.

Coal, iron, zinc, copper and lead are especially abundant, nearly half the zinc produced in the world coming from Prussia.

2. **The CHIEF PURSUITS** are agriculture, wool-growing, mining, and manufacturing.

Grain, orchard fruits, root-crops, hemp and flax are raised; with wine in the Rhine valley and other warm valleys of the south.

3. **COMMERCE.**—Germany has a large trade, which is carried on both by fairs and in the ordinary method. The chief exports are wheat, wine, wool, and manufactures.

Cities of Prussia.—BERLIN is the capital of Prussia and of the Empire, and is the seat of a celebrated University.

BRESLAU is the greatest wool-market in Europe, and the seat of one of the great German fairs.

COLOGNE, the commercial centre of the Rhine basin, has large manufactories and distilleries, and an extensive trade in wines and perfumeries. It is celebrated for its beautiful cathedral.

HANOVER was the capital of the former kingdom of Hanover, now a part of Prussia. MAGDEBURG is an important commercial centre, and one of the strongest fortresses of Prussia.

KÖNIGSBERG and Danzig are the principal markets for grain and other farm produce in Prussia.

Other Cities.—MUNICH, the capital of Bavaria, is celebrated for its manufacture of astronomical instruments. DRESDEN, the capital of Saxony, is renowned for its art galleries and its valuable libraries.

Questions.—Of what does the Empire consist? Which is the leading State? Where is Prussia? Describe the soil and mineral wealth of the Empire. What are the leading pursuits? The agricultural productions? Describe the trade. Name the six great cities of Prussia? What can you say of Berlin? Breslau? Cologne? Hanover? Magdeburg? What are the chief grain markets of Prussia? Name four other great cities in the empire. What can you say of Munich? Of Dresden?

LEIPZIG, also in Saxony, is the seat of the most famous of German fairs, and the great centre of the book trade of Germany.

HAMBURG is a "Free City." It is largely engaged in ship-building, and the greatest centre of foreign trade in the German Empire.

Strasbourg, one of the strongest fortresses in Europe, was taken from French in the war of 1870-71.

THE AUSTRIAN EMPIRE.

Area, 240,350 sq. m. Pop. 35,904,400.

Position and Divisions.—The Austrian Empire occupies the middle part of the Danube basin, together with the eastern half of the Alps and the adjacent highlands.

It comprises the archduchy of Austria, in the western highlands; the kingdom of Hungary, occupying the plains; and a number of imperial provinces, some of which were once independent States.



VIEW ON THE RHINE.

Characteristics.

1. **NATURAL WEALTH.**—This Empire includes the largest land plains of high Europe, together with the richest mines and the most extensive forests.

Iron, copper, lead, gold, silver and quicksilver are all found in considerable

quantities; and the rock-salt mines, near the sources of the Danube, are the most extensive in the world.

2. **PURSUITS AND PRODUCTIONS.**—Stock-raising and the cultivation of grain, flax and the vine are the leading pursuits in Hungary. The Hungarian wines are among the most celebrated in Europe. The western provinces are largely engaged in the manufacture of linens, woollens, silks, and glass-ware.

3. **The TRADE** of the Empire is mainly overland, with its surrounding States. Grain, wine, and manufactures are the chief exports.

Imperial Cities.—VIENNA is the capital of the Empire, and the chief centre of commerce and manufacturing. It is celebrated for its magnificent public buildings, its University, and its valuable libraries.

TRIESTE is the only important sea-port of the Empire, and seat of a naval academy.

PRAGUE was the capital of the former Kingdom of Bohemia, and the seat of the oldest University in Central Europe.

Questions.—What can you say of Leipzig? Of Hamburg? Of Strasbourg? Where is the Austrian Empire? Of what does it consist? Describe its wealth.

Name the chief pursuits of the people in Hungary. In the western provinces describe the trade of Austria.

Name the largest three imperial cities. Describe Vienna; Trieste; Prague.

Grätz has extensive iron and steel works. *Brünn* is the first city of the Empire in the extent of its woolen and silk manufactures.

Cities of Hungary.—*PESTH*, the capital and commercial metropolis of Hungary, is the second city of the Empire in population.

Szegedin is the chief market of Hungary for grain and wine; *Theresienstadt*, for live stock, hides, and wool.

SWITZERLAND.

Area, 16,000 sq. m. Pop. 2,663,100.

Position and Characteristics.—Switzerland is a Republic, consisting of twenty-two divisions, called Cantons.

It occupies the middle part of the Alps, and the plateau at their northern base, including the larger number of the Alpine lakes. The whole country is remarkable for its grand and picturesque mountain and lake scenery.

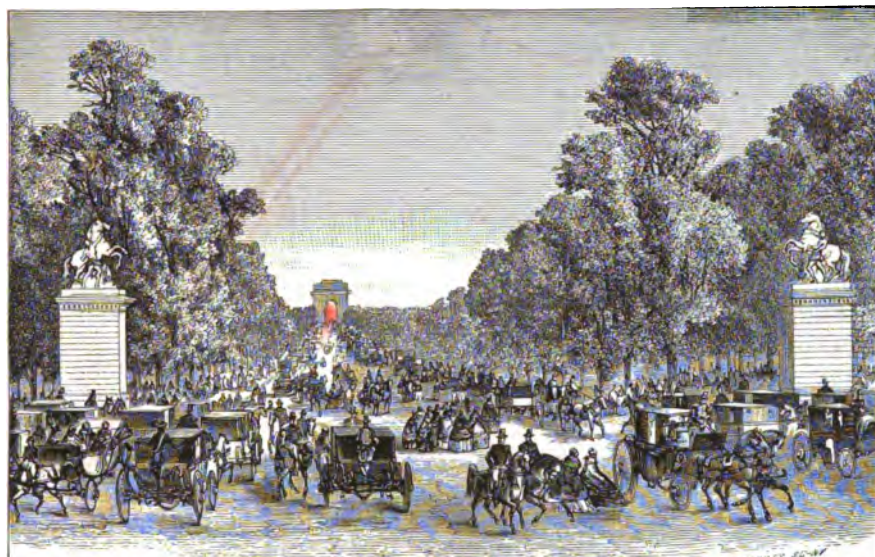
The summits of the Alps are covered with perpetual snow, and in all the high valleys are immense ice rivers, called *glaciers*.

These move slowly and steadily down from the snow-fields to the warmer valleys, where the ice melts, forming copious streams. Most of the rivers rising in the Alps have their origin in the melting of the glaciers.

Manufacturing.—especially of watches, jewelry, and silks—is the great business of the Swiss, and the manufactures are almost the only exports.

Cities.—*Geneva* is the commercial metropolis of Switzerland, and, with *Neuchâtel*, the chief seat of the manufacture of watches and jewelry.

Zurich is the great centre of silk manufacture. *Berne* is the capital of the Republic.



THE CHAMPS ÉLYSÉES, IN PARIS.

FRANCE.

Area, 204,100 sq. m. Pop. 36,469,800.

Position and Characteristics.—1. **SURFACE.**—France occupies the highlands and plains extending from the Alps to the Bay of Biscay and the English Channel.

It possesses every variety of surface, from the highest and most rugged portion of the Alps to level plains but little above the sea; and is rich in mines of coal, iron, and lead.

Questions.—What two smaller cities have important manufactures? Name the three leading cities of Hungary. What can you say of *Pesth*? Of *Szegedin*? Of *Theresienstadt*?

What and where is Switzerland? What is remarkable about the high Alps? What is the chief pursuit of the Swiss? Name the two leading cities of Switzerland. What can you say of *Geneva*? Of *Zurich*? What and where is the capital of the Republic?

What region is occupied by France? Describe its surface and its mineral wealth?

2. **THE CLIMATE** varies from warm-temperate in the south-east, to cool-temperate in the north; and the soil is in general highly productive.

3. **PURSUITS AND PRODUCTIONS.**—The chief pursuits of the people are agriculture, iron-mining, and manufacturing.

In the north, the principal crops are the hardy grains, orchard fruits, and root-crops, the last including the beet, which is largely raised for the manufacture of sugar.

In central France, corn and the vine are the leading articles cultivated, and immense quantities of wine and distilled liquors are made.

In the south, the olive and the mulberry are largely cultivated, especially in the *Cévennes* and the *Rhône* valleys, where great quantities of silk are produced.

4. **THE COMMERCE** of France is extensive, the chief exports being wines and liquors, silks, and other produce of the manufactures. The last includes a very great variety of ornamental wares of the most elegant description.

Cities.—*PARIS*—the metropolis of France, and the most populous city of continental Europe—is renowned for the magnificence of its public buildings, its valuable art galleries, libraries and museums, and the great variety and elegance of its manufactures.

LYON is the chief centre of silk manufacture in France. *MARSEILLE* is

the chief market for the silks, fruits, and wines of southern France.

BORDEAUX, the market for the agricultural region of central France, has an immense trade in wines, brandies, and other liquors.

LILLE and *ROUEN* are the chief seats of the cotton and linen manufacture in France. *TOULOUSE* is the centre of trade with Spain, and has extensive iron, copper, and brass works. *NANTES* is largely engaged in ship-building.

St. Étienne is the market of the richest coal region of France. *Brest*, *Toulon* and *Le Havre* are the chief naval stations and sea-board fortresses of France.

Note.—The imperial government of France, under Napoleon III., was overthrown in 1870, during the Franco-Prussian war. Since that time a republican form of government has been maintained, but it has not yet been definitely sanctioned by the vote of the people.

Questions.—What can you say of the climate and soil of France? The chief pursuits of the people of France? What are the agricultural productions of the north? Of central France? Of the south?

What is the extent of the commerce of France? What are the exports? Name the largest four cities of France. What can you say of *Paris*? Of *Lyon*? Of *Marseille*? Of *Bordeaux*? What four other great cities has France?

What is the importance of *Lille* and *Rouen*? Of *Toulouse*? Of *Nantes*? Of *St. Étienne*? What are the great naval stations of France? State the condition of the government of France.

MAP STUDIES.

What bodies of water lie east and south of the British Isles? What waters separate Ireland from Great Britain? Where are the Hebrides Islands? The Orkneys? Where is the Isle of Man? The Isle of Wight?

In what part of Great Britain is England? In what part is Scotland? Where is Wales?

What is the surface of Scotland and Wales? What part of England is mountainous? What part is most level? What parts of Ireland are elevated and hilly?

In what part of England is the River Thames? The Severn? The Tyne? Where is the River Mersey? The Clyde? The Shannon?

What great city is on the Thames River? What great city is at the mouth of the Mersey? What great city is about midway between London and Liverpool? What great city lies nearly due east of Liverpool? What two great cities are in the interior, north-east of Manchester?

What two great cities between Leeds and London? In what part of England is the city of Bristol? Newcastle? Kingston-upon-Hull? Portsmouth?

In what part of Scotland is Glasgow? Edinburgh?

In what part of Ireland is Dublin? Belfast?

Which of all the cities named above are on or near the coast of the North Sea? Which are on or near the coast of the Irish Sea? Which are in the interior of England? Which are in the interior of Scotland?

GREAT BRITAIN AND IRELAND.

Area, 121,300 sq. m. Pop. 31,817,100.

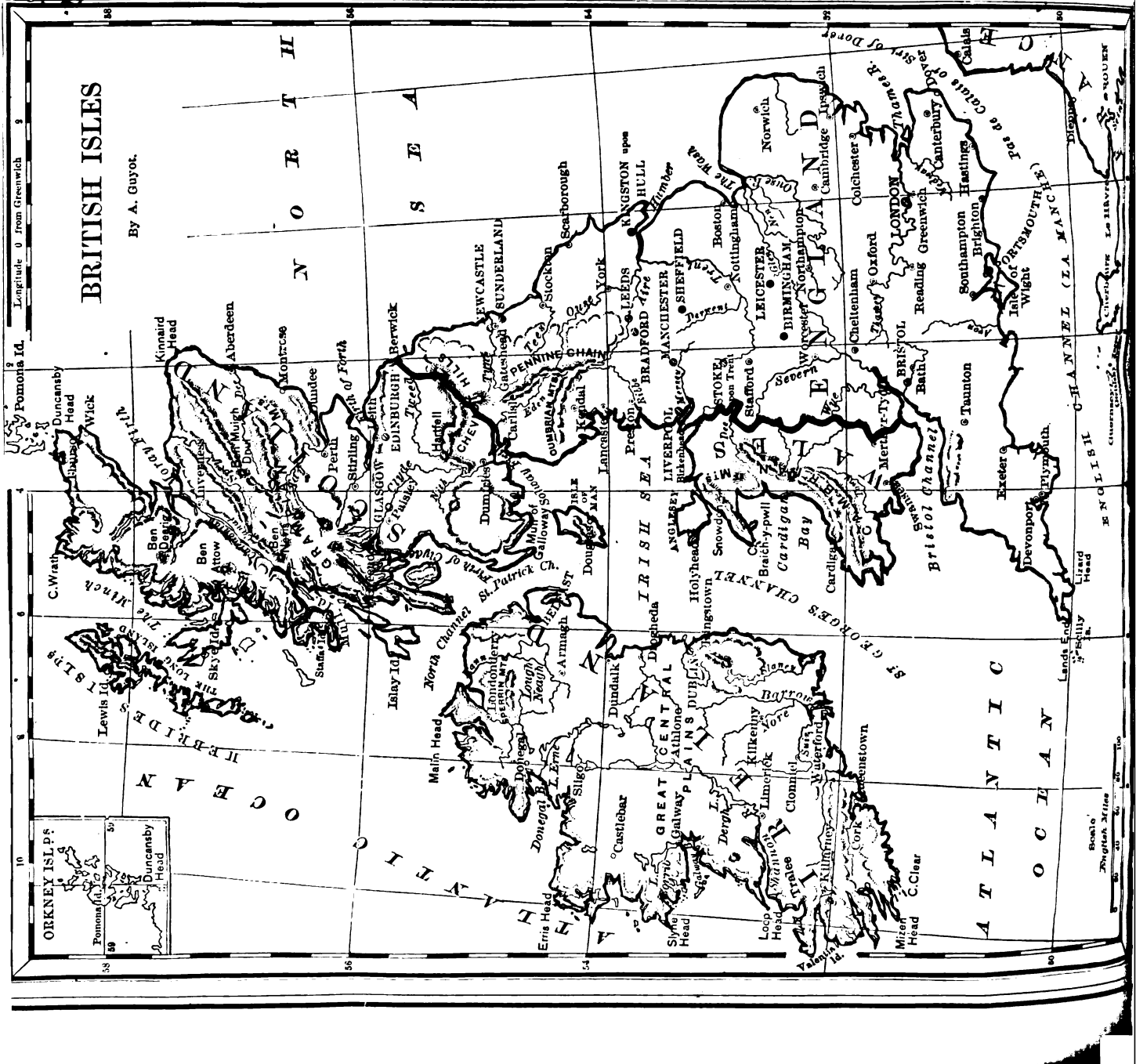
Position.—The United Kingdom of Great Britain and Ireland occupies the islands north of the British Channel.

Great Britain, the larger island, includes England, Scotland, and Wales, which in ancient times were separate kingdoms.

Characteristics.—1. The SURFACE of England is generally level, but the northern part is quite elevated and rugged. Scotland and Wales are mountainous. Ireland is hilly in the north and south, while the middle part is a broad plain.

2. The CLIMATE is mild, with warmer winters and cooler summers than the mainland. Moist-

Questions.—What constitutes the United Kingdom of Great Britain and Ireland? What are the divisions of the larger island? Describe the surface of the United Kingdom. Describe the



ure being plentiful, the vegetation is abundant, and is distinguished by the brilliant green tints of the foliage.

3. The **MINERAL WEALTH** is great, especially in England and Wales, where coal, iron, tin, copper, and lead abound.

4. **PURSUITS AND PRODUCTIONS.**—Agriculture is carried on with great skill, and flax and the hardy grains and fruits are largely cultivated. In the highlands of Scotland and Wales many of the people are shepherds.

The mines are all actively worked; and in the extent of her manufactures of cotton goods, linens, woollens, and steel and iron wares, England surpasses all other countries.

5. **COMMERCE.**—The United Kingdom is the leading commercial country of the world, the greatest commercial centre being in England.

The chief exports are the products of the manufactories. The leading imports are bread-stuffs, meats, and other articles of food; cotton, wool, and other materials for the manufactories.

Cities.—**LONDON**, the capital of the United Kingdom, with a population of three and one-fourth millions, is the most populous city, and the greatest commercial emporium on the globe, its trade by sea nearly equalling the entire foreign commerce of the United States.

LIVERPOOL, next to London in commercial importance, is the great market for the mining and manufacturing districts of northern England. It imports immense quantities of cotton and bread-stuffs from the United States.

MANCHESTER is the first city of the world in the extent of its cotton manufactures; and **BIRMINGHAM** takes the lead in the manufacture of heavy metallic wares, engines, and machinery.

LEEDS is the great centre of the woollen manufacture in Great Britain; **SHEFFIELD**, of the manufacture of cutlery, plated ware, and scientific instruments; **NOTTINGHAM**, of hosiery and machine-made lace; and **BRADFORD**, of worsted dress-goods.

BRISTOL has a large coasting trade. **NEWCASTLE** is the greatest coal-market of England. **KINGSTON-UPON-HULL** is the chief seat of trade with continental ports on the Baltic and North Seas. **PORTSMOUTH** is the leading naval station of the United Kingdom.

GLASGOW is the greatest centre of commerce and manufacturing in Scotland, is largely engaged in building iron steam-ships, and has the most extensive chemical works in the United Kingdom.

EDINBURGH is the seat of the most famous University of Scotland.

DUBLIN is the most populous city of Ireland. **BELFAST** is the great centre of linen manufacturing and the linen trade.

The Government of the United Kingdom is a constitutional monarchy; the executive, legislative, and judicial departments of which are nearly as distinct as in a republic.

The executive consists of the Sovereign and a cabinet of ministers. The legislative department rests in a Parliament, consisting of the Sovereign, a House of Lords, who inherit their office, and a House of Commons, elected by the people.

Questions.—Describe the mineral wealth of the United Kingdom. The pursuits of the people. The commerce. Name the largest city of England. What is the importance of London? Of Liverpool? Of Manchester? Of Birmingham? Of Leeds? What is the leading interest of Sheffield? Of Nottingham? Of Bradford?

What can you say of Bristol? Of Newcastle? Of Kingston-upon-Hull? Of Portsmouth? What is the importance of Glasgow? Of Edinburgh? Of Dublin? Of Belfast? Describe the government of the United Kingdom.

The British Empire, having an area of 8,050,000 square miles, is the most extensive on the globe.

It consists of the United Kingdom and the entire continent of Australia; British India, in Asia; Cape Colony and Natal, in Africa; British America, and British Guiana, with smaller possessions in all parts of the world. Its entire population is 199,000,000.

REVIEW OF THE GREAT CITIES OF EUROPE.

The largest cities of Europe, in the order of their population, are the following:—

1. Above 1,000,000. **LONDON, PARIS, CONSTANTINOPLE.**
2. Above 500,000. **VIENNA, BERLIN, ST. PETERSBURG.**
3. Above 400,000. **Liverpool, Manchester, Glasgow, Naples.**
4. Above 300,000. **MOSCOW, BIRMINGHAM, HAMBURG, MADRID, LYON, BRUSSELS, MARSEILLE.**
5. Above 200,000. **DUBLIN, TOULOUSE, AMSTERDAM, MILAN, LEEDS, SAW, ROME, SHEFFIELD, LISBON, PALERMO, BRESLAU, TURIN, BURGHE, PESTH.**
6. Above 100,000. **Bordeaux, Barcelona, Bristol, Genoa, Dresden, Belfast, Florence, Prague, Lille, Nottingham, Bradford, Stockholm, Cologne, Newcastle, Antwerp, Ghent, Bukharest, Kingston-upon-Hull, Trieste, Odessa, Sevilla, Rotterdam, Bologna, Magdeburg, Portsmouth, Nantes, Königsberg, Messina, Valencia, Leipzig, Liège, Hanover, Kishenew, Rouen, Adrianople.**

COMMERCIAL REVIEW OF EUROPE.

Producers of Raw Materials.—The leading *agricultural* States of Europe are those having the greatest area of fertile plains, namely: Russia, Prussia, Hungary, Italy, France, and Holland.

The leading *mining* countries are England, Norway, Sweden, France, Belgium, Prussia, Austria, and Russia.

The States most largely engaged in the *fisheries* are Norway and Sweden, Denmark, Holland, the United Kingdom, and Russia.

Export of Raw Materials.—The States whose exports consist principally of raw materials, are:

Russia, Prussia, Hungary, and Roumania—exporting grain, flax, wool, and hides.

Italy, Spain, Turkey, and Greece—exporting silks and dried fruits.

Holland—exporting her colonial productions.

Sweden and Norway—exporting minerals, lumber, furs, and fish.

The last-named articles also form a large part of the export trade of Russia.

Export of Manufactures.—The countries which export manufactures almost exclusively, are the United Kingdom, France, Belgium, Switzerland, and the highland countries of the German and Austrian Empires.

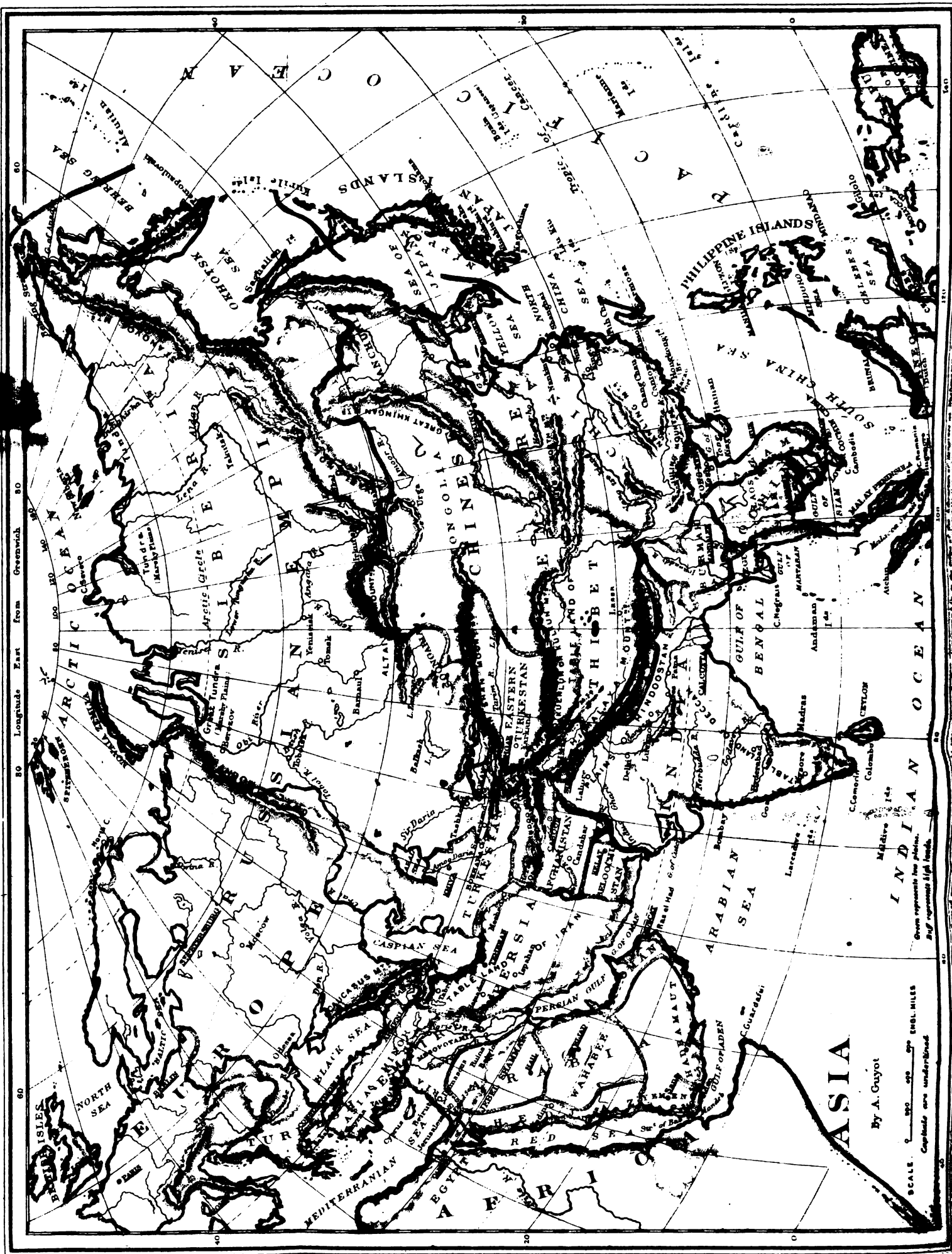
The trade in wines and distilled liquors is chiefly confined to Hungary, Italy, France, Spain, Portugal, and the Rhine provinces of Prussia.

The Great Commercial Centres of Europe are, London, Liverpool, and Glasgow, in Great Britain; Paris, Marseille, and Bordeaux, in France; Naples, Genoa, and Palermo, in Italy; Amsterdam, in Holland; Antwerp, in Belgium; Hamburg, Berlin, and Breslau, in Germany; and St. Petersburg and Odessa, in Russia.

Questions.—Describe the British Empire? Name the cities of each of the first five grades in their order. State in what country, and what part of the country, each of the above-named cities is situated, and on what river, lake, or other body of water; and mention some fact of interest in connection with it.

What States of Europe are most largely agricultural? What are the leading mining countries? What countries are most largely engaged in the fisheries? What States export chiefly grain, flax, wool, and hides? What States export mainly raw silk and dried fruits? What States export lumber, fish, furs, and minerals?

What States export manufactures almost exclusively? What countries are largely engaged in the production and export of wines and distilled liquors? Name the great commercial emporiums of Europe.



MAP STUDIES.

Position.—What oceans border upon Asia? What two continents on the west of it? What sea lies between Asia and Africa? What isthmus connects these two continents? What river, sea, and mountains form the boundary between Asia and Europe?
What strait separates Asia from North America? What parallel passes near the southernmost point of Asia? Near the northernmost point?

Outline.—What great border seas lie upon the eastern coast of Asia, commencing at the most northerly? What peninsula east of the Sea of Okhotsk? What islands east of the Sea of Japan? What peninsula east of the Yellow Sea? What large group of islands east of the South China Sea? What great island south-west of the Philippine Islands? What three great peninsulas in Southern Asia? What waters border upon each? What long narrow peninsula extends southward from Indo-China? What cape forms the southern terminus of the Malay peninsula? What large island south of the Malay peninsula? How is it separated from that peninsula?

What cape forms the southern terminus of India? What large island east of Cape Comorin? What strait connects the Red Sea with the Indian Ocean? What peninsula between the Mediterranean Sea and the Black Sea? What is the extreme northern point of Asia? The extreme eastern point? Where is the Gulf of Bengal? The Persian Gulf? The Persian Gulf? The South China Sea? The Yellow Sea? The Gulf of Aden? The Japan Sea? The Strait of Bab-el-Mandeb? Borneo? Ceylon? Sumatra? Formosa? Saghalien? The Japan Islands? The Philippine Islands?

Surface.—What great mountain system at the north of India? What table-land north of the Himalaya Mountains? What mountains form the northern border of the table-land of Tibet? Where are the Thian-Shan Mountains? The Altai Mountains? The Great Kinkhan Mountains? What table-land between the Caspian Sea and the Persian Gulf? What table-land forms the peninsula of India? In what part of Asia are the most extended plains? What plains between the Deccan and the Himalaya Mountains?

Rivers and Lakes.—What three great streams drain the plains of Northern Asia? Describe the course of each. What three great streams enter the Pacific? Describe the course of each. What two streams enter the northernmost part of the Gulf of Bengal? Describe the course of each. What stream drains the western part of the plains of Hindoostan? Describe its course. What two rivers unite and enter the Persian Gulf? What body of water in the plain east of the Caspian Sea? What two large rivers enter the Aral Sea? Describe their course. What river drains the plateau between the Kuenlun and Thian-Shan Mountains? What lake in the plain east of the Aral Sea? What large lake north of the Altai Mountains? What river carries its waters to the ocean?

Countries and Cities.—What Empire occupies the larger part of Central and Eastern Asia? How is the Chinese Empire bounded? In what part of the Empire is China? Manchuria? Mongolia? Tibet? Korea? What country occupies the region north of the Chinese Empire? What three countries in the Himalaya Mountains?

What country in the northern part of Indo-China? In the eastern part? In the southern part? In what country of Indo-China is the city of Bangkok? Saigon? What country occupies the regions south of the Himalaya Mountains? What country in the plains east of the Caspian Sea?

What three countries in the middle and eastern part of the table-land of Iran? To what country do the plains and highlands west of Persia belong?

What and where is the capital of Japan? What two large cities south-west of Tokio? Where is Yokohama? What and where is the capital of the Chinese Empire? In what part of China is Su-chau? Canton? King-te-ching? Fuh-chan? Nanking? Ning-po? Shanghai?

What and where is the capital of India? In what part of India is Bombay? Madras? Hyderabad? Lucknow? Patna? Benares? What and where is the capital of Siam? In what part of Indo-China is Saigon? What and where is the capital of Persia? In what part of Persia is Tebriz?

In what part of Asiatic Turkey is Damascus? Smyrna? Bagdad? Beirut? Jerusalem? In what part of Arabia is Muscat? Mocha? Mecca? Medina? In what part of Turkistan is Bokhara? Khiva? In what part of Siberia is Tobolsk? What and where is the capital of Eastern Turkistan? In what

part of Eastern Turkistan is Yarkand? In what part of Afghanistan is Cabool? Herat? What is the chief city of Beloochistan? In what part of Tibet is Lassa?

TO DRAW THE MAP OF ASIA.

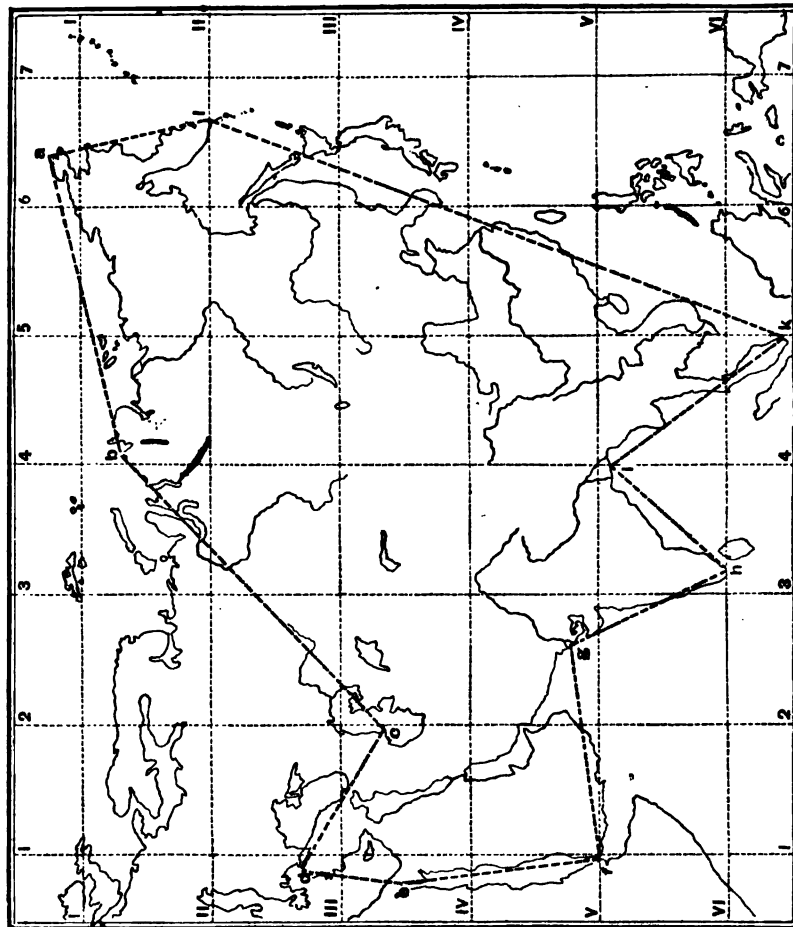
Construction Lines.—Draw, at equal distances apart, six horizontal lines, and seven vertical lines crossing the horizontal. Number them as in the Diagram. M = one space = 1,000 miles.

Contour.—Mark the position of East Cape (a), the Arctic coast near North-east Cape (b), Cape Schachow (c), the western coast of Asia Minor (d). Connect and draw the Arctic coast and the boundary between Asia and Europe.

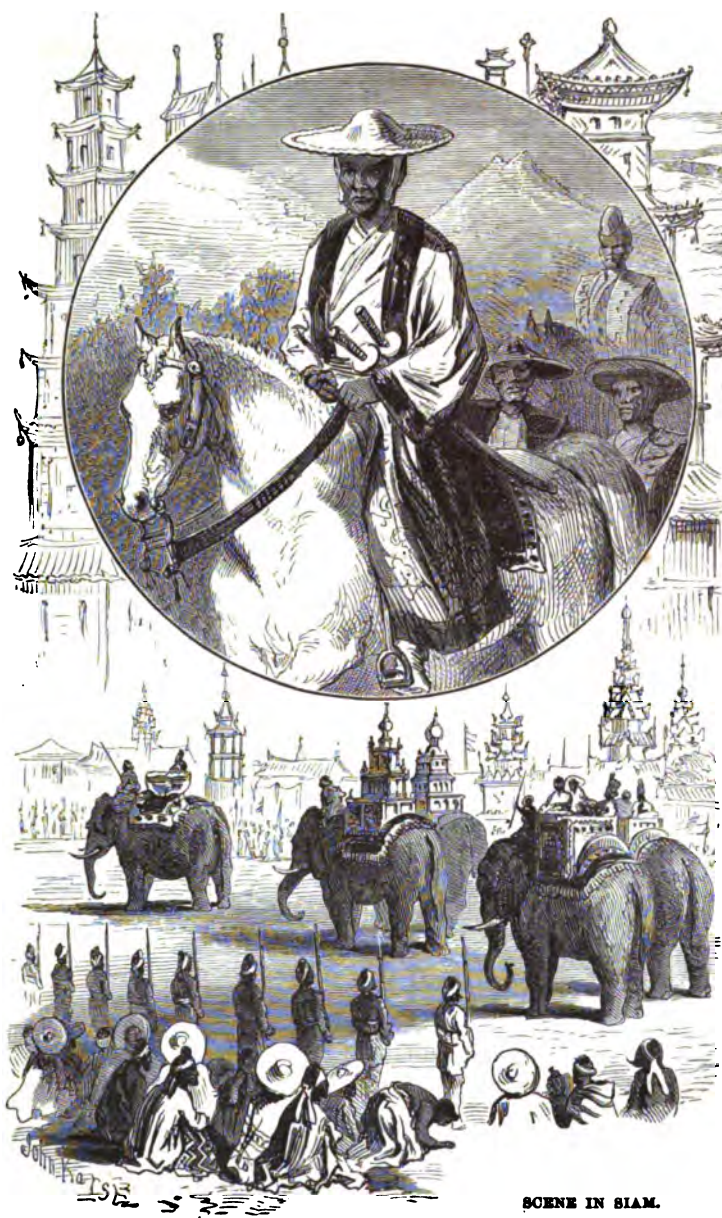
Mark the position of the Isthmus of Suez (e), the Strait of Bab-el-Mandeb (f), the mouth of the Indus (g), Cape Comorin (h), the mouth of the Ganges (i), and Cape Romania (k). Connect and draw the western and southern coasts. Mark the position of the southern point of Kamohatka (l), connect with Cape Romania, and draw the eastern coast.

Exercise on Distances.—What is the distance from the mouth of the Ganges to the Arctic coast? How much farther south is Cape Romania than the mouth of the Ganges?

How wide is the broadest part of each southern peninsula? How far from the Caspian Sea eastward to Korea? Westward to the Isthmus of Suez?



DESCRIPTION OF ASIA.



I. SURFACE.

EASTERN ASIA consists of a great central mass of elevated land, including the highest plateaus and mountains on the globe, with slopes descending towards the north, the east, the south, and the west.

The **Central Highland** is a great plateau, bordered on each side by high mountains. On the south are the Himalaya Mountains; on the north, the Altai Mountains; on the east, the

Questions.—Of what does Eastern Asia consist? Describe the central highland and its surroundings. What mountain chains cross it?



SCENE ON THE STEPPES OF SIBERIA.

Great Kinghan and more southerly ranges; and on the west the small plateau of Pamir and the mountains north of it.

The Kuenlun and Thian-Shan Mountains cross this plateau from east to west, dividing it into three portions of nearly equal breadth, but very unequal height.

The Himalaya Mountains are the highest on the globe, their loftiest peak being nearly thirty thousand feet high. The Thian-Shan and Kuenlun chains are about equal to the Andes in altitude; while the Altai and other ranges of eastern Asia do not exceed the Rocky Mountains in elevation.

The table-land of Thibet is from sixteen thousand to eighteen thousand feet high, while the plateaus of eastern Turkestan and Mongolia, north of the Kuenlun Mountains, are only from two thousand to five thousand feet above the sea.

Slopes.—The northern and western slopes consist of a vast plain, descending to the Arctic Ocean and the Caspian Sea.

The eastern and southern slopes, descending to the Pacific and Indian Oceans, consist of alternate low plains, mountain lands, and small plateaus.

WESTERN ASIA has for its central mass the table-land of Iran and the mountainous peninsula of Asia Minor.

On the north are the lowlands of Turan, and on the south, the plains of the Euphrates basin and the plateau of Arabia and Syria.

II. RIVERS AND LAKES.

Rivers.—The great rivers of Eastern Asia all have their sources in the central highlands, and descend the slopes to the surrounding oceans and seas.

Those on the same slope have similar courses, and all receive very few tributaries in comparison with their length.

The longest rivers of Western Asia rise in the highlands south of the Caucasus Mountains.

Questions.—What is the height of the great mountain chains of Central Asia? Of the central plateau? Of what do the northern and western slopes of Eastern Asia consist? The eastern and southern slopes? Of what does Western Asia consist?

Describe the great rivers of Eastern Asia. Where do the longest streams of Western Asia rise?

Asia, like Europe, is remarkable for the great number of rivers it sends in separate courses to the sea; while the streams of the American continents are so combined as to form but a few great systems.

The three great rivers of the northern slope, the three of the eastern slope, and the Mekong and Brahmapootra of the southern slope, vary from thirty-four hundred to twenty-three hundred miles in length; the Yenisei, Yang-tse-kiang, and Obi being the longest.

The secondary streams—Irawaddy, Ganges, Indus, Amoo-Daria, Sir Daria, Tarim and Euphrates—vary from eleven to eighteen hundred miles in length.

Lakes.—Asia has few fresh-water lakes, but in its inland plains and inclosed plateaus are innumerable salt lakes.

The largest of the fresh-water lakes are Baikal and Balkhash. Among the salt lakes are the Caspian Sea, four times as large as Lake Superior, and the Aral Sea, somewhat larger than Lake Michigan.

The Dead Sea, in Syria, into which the Jordan River flows, is a small salt lake, whose surface is about thirteen hundred feet below the level of the ocean.

III. CLIMATE.

Temperature.—The great southern peninsulas of Eastern Asia and the whole of Western Asia have a hot climate.

The middle regions, extending from the Himalaya to the Altai Mountains, are temperate; and the great northern plains, exposed to the icy Arctic winds, very cold.

Thibet, though in the temperate region, is, on account of its great altitude, so cold as to be almost uninhabitable, except in the valleys.

Moisture.—1. In EASTERN ASIA, the only regions which are abundantly watered by rains are the slopes at the east and south of the central highlands, and the mountain portions of the interior.

The great plateau, shut off from the ocean winds by the high mountains on its eastern and southern borders, is almost rainless. The great plain extending from the Obi River to the Caspian Sea receives only scanty rains which, in the southern portion, fall principally in spring and autumn.

2. WESTERN ASIA.—The mountainous region, lying to the south of the Black Sea and the Caucasus, receives plentiful rains; but the table-land of Iran and the plateau of Syria and Arabia are almost rainless, except along their borders.

These borders being high and mountainous, condense the vapor borne by the sea-winds, and prevent it from reaching the interior plateaus.

IV. VEGETATION AND ANIMALS.

Fertile Regions.—The eastern and southern slopes of

Questions.—In what respect are the inland waters of Asia and Europe remarkable? What is the length of the great streams of the northern and eastern slopes? How long are the streams of a second class?

What can you say of the lakes of Asia? Name its largest fresh-water lakes? Its great salt lakes. Describe the temperature of Asia. What is the temperature of Thibet, and why?

What are the only well-watered regions of Eastern Asia? What is the character of the central plateau? Of the plains between the Obi River and the Caspian Sea? Describe the distribution of moisture in Western Asia. Why are the plateaus dry?

Eastern Asia bear a luxuriant vegetation, including an immense variety of useful plants.

The mountainous lands of the interior, and of Western Asia, are also highly productive. Many of our most delicious fruits and most beautiful flowers are natives of the mountain valleys of Central and Western Asia.

The Altai Mountains and the highlands at their northern base bear forests like those of Northern Europe.

Barren Lands.—The great plateaus of Arabia, Iran, and Mongolia are almost entirely desert.

The vast plain between the Obi and the Caspian Sea, in the best portions, consists of steppes bearing only stunted shrubs, or grasses and other herbaceous plants that die to the root in the long summer droughts.

The low plain on the Arctic coast consists principally of frozen marshes, called Tundras, only the surface of which is thawed in summer.

Animals.—Asia is remarkable especially for the great number of its native animals which have domesticated.

The horse and ass; many species of oxen, goats, sheep, and swine; the camel and dromedary; the reindeer, and the elephant, are all natives of Asia; and all had been already domesticated by its inhabitants at the beginning of history.

The elephant is used as a beast of burden, and for other purposes, throughout the peninsula of Indo-China and in some parts of India.

The orang-outang, the animal most like the human form; the elephant, rhinoceros, and tapir; the lion and tiger; bears of several kinds; and a great number of birds—including the peacock, the pheasant, and the species from which our domestic fowls are derived—are all found in the south-eastern peninsulas and adjacent islands.

V. INHABITANTS.

EASTERN ASIA, excepting India, is peopled by the yellow race, of which the most advanced nations are the Japanese, Chinese, and Siamese.

WESTERN ASIA AND INDIA are peopled by branches of the white race, of which the Arabs, Armenians, Persians, Afghans, Belooches, and Hindoos are the principal.

In the steppes, between the Obi and the Caspian, are the Kirghiz, Tartars, Turkomans, and other peoples which form a transition between the white and the yellow race.

Government and Religion.—The independent States of Asia are all absolute monarchies, and the governments are generally very oppressive.

The inhabitants of Western Asia are almost wholly Mohammedans; those of Eastern Asia are chiefly Brahmans and Buddhists.

Questions.—Describe the fertile regions of Asia, with their productions. Name and describe the barren regions of Asia. What is especially remarkable about the animals of Asia? Name the Asiatic animals which have been domesticated. What animals especially characterize the south-eastern peninsulas?

Of what race are the inhabitants of Eastern Asia? Of Western Asia and India? What peoples inhabit the steppes? What is the character of the Asiatic governments? What is the religion of the people of Western Asia? Of Eastern Asia?

COUNTRIES OF ASIA.

RUSSIAN POSSESSIONS.

Position and Characteristics.—The Russian possessions in Asia include all that part of the continent lying to the northward of the Amoor River, Altai Mountains, and Aral Sea.

The principal divisions are Siberia, north, and Soongaria, south of the Altai Mountains; Russian Turkestan, in the basin of the Sir Daria; and Trans-Caucasia, south of the Caucasus Mountains.

The valleys of Turkestan, Trans-Caucasia, and Soongaria are the only portions of this vast domain sufficiently warm and fertile to make agriculture profitable.

The steppes are peopled only by nomadic herdsmen. Siberia, though rich in forests and minerals, is so cold as to be uncultivable, except in the southern valleys.

Cities.—TIFLIS, the capital of Trans-Caucasia; Tashkend, the capital of Russian Turkestan; Tobolsk, the capital of Western Siberia; and Kiakhla, the entrepôt of a large tea-trade with China, are the chief cities of Asiatic Russia.

THE CHINESE EMPIRE.

Area, 3,742,000 sq. m. Pop. 446,500,000.

Position.—The Chinese Empire occupies the middle portion of Eastern Asia. It includes China proper, Manchuria and Corea, on the eastern slope; and Thibet, and Mongolia, in the central plateau.

Thibet has but a scanty population, and its inhabitants, who are confined mainly to the valleys, are chiefly shepherds.

Lassa, in the most fertile and beautiful of the valleys, is the capital and commercial metropolis of Thibet; and is renowned for its Buddhistic temples and schools.

Mongolia is a desert, with a scanty growth of herbage after the spring and autumn rains. It is peopled only by nomadic herdsmen.

Manchuria consists of alternate wooded lands, fertile prairies, and steppes or deserts. Its population is chiefly nomadic, but it contains some cities.

MOUKDEN, the largest city, was the capital of the Manchou tribes who conquered China, and from whom the royal family is descended.

Corea is believed to be fertile and populous, but as foreigners are not allowed to enter the country, little is known of it. *Kingkitau* is its capital.

China includes vast low plains of the greatest fertility, and mountain-lands abounding in all the most valuable minerals, especially gold, silver, copper, iron, and coal.

The plains are among the most densely peopled regions of

Questions.—What do the Russian possessions in Asia include? What is the character of these countries? What are the chief cities of Asiatic Russia?

What is included in the Chinese Empire? What is the character of Thibet? Of Mongolia? Of Manchuria? Of Corea? What regions are included in China? Describe the plains of China.

the globe, and are cultivated with the utmost industry, though with little skill.

The **PRINCIPAL PRODUCTIONS** are rice and millet, which form the chief food of the people; tea, cotton, sugar, and silk.

MANUFACTURING is very extensive in China, but is carried on almost wholly by hand, and with the simplest of implements. Silks, crape shawls, and porcelain are the chief manufactures.

The **INLAND COMMERCE** is immense. The great rivers and innumerable canals furnish transportation through all parts of China proper; and caravans of camels carry the merchandise across the barren highlands to other parts of the empire, and to adjacent countries.

The chief exports are tea, raw silk, and manufactures.

Cities.—China contains a large number of great cities, including five (those first named below) which have from 1,000,000 to 2,000,000 of inhabitants each.

SU-CHAU is the most populous and beautiful of Chinese cities.

PEKING is the capital of the Empire.

CANTON is the greatest commercial emporium of Eastern Asia.

KING-TE-CHING contains the largest porcelain manufactory of the world.

CHANG-CHAU is the great centre of silk manufacture in China.

FUH-CHAU is the market of the black tea district of Central China.

NANKING, the former capital, is the chief seat of Chinese learning.

NING-PO is the principal centre of trade with Japan.

SHANG-HAI is the greatest market in China for the export of tea and silk.

The **Chinese** are the most ancient of civilized nations now existing; for two thousand years or more they have made little progress, and are greatly inferior to the European nations.

For centuries foreigners were strictly excluded from the country, but they are now permitted to trade at all the principal sea-ports.

EASTERN TURKESTAN.

Eastern Turkestan occupies the low plateau between the Kuenlun and Thian-Shan Mountains. It was, until recently, a part of the Chinese Empire, but it is now independent.

A narrow belt of fertile land lies at the base of the surrounding mountains; but the interior is barren, and occupied only by nomadic tribes.

The fertile lands yield large harvests of the grains and fruits of the Temperate Zone; and a considerable trade is carried on with China and other parts of the Empire.

YARKAND and *Kashgar* are commercial centres of considerable importance. *Kashgar* is the capital.

Questions.—Name the principal productions of China. What can you say of manufacturing in China? What are the leading manufactures? What is the extent of the inland commerce, and how is the merchandise transported? What are the chief exports of China?

What can you say of the population of the Chinese cities? Name and state one fact of interest in regard to each of the largest five. The four next in importance.

What is the antiquity of the Chinese civilization? How do the Chinese compare with European nations in progress? What is their policy in regard to foreigners?

What country of the central highland formerly belonged to the Chinese Empire? What is the character of Eastern Turkestan? What are its productions? Name its principal cities?

JAPAN.*Area, 140,400 sq. m. Pop. 34,785,300.*

Position and Characteristics.—Japan occupies the large islands east of the Japan Sea, and greatly resembles China in its mineral wealth, the fertility of its soil, and its chief agricultural productions and manufactures.

Cities.—**TOKIO** (formerly called Yedo), with a population of nearly 800,000 inhabitants, is the capital and commercial metropolis of the Empire.

KIOTO (called Miaco before the political reorganization of the Empire), is the sacred city and chief seat of Japanese learning.

OSAKA is the centre of a great trade in agricultural produce.

Yokohama and **Kanagawa**, on opposite sides of the bay of Yedo, are the places of residence of foreign merchants and consuls.

The Japanese are much like the Chinese in character and in degree of civilization; but they are more generally educated, and have of late made great reforms in their social organization and foreign policy.

Large numbers of Japanese are now being educated in Europe and America, at the expense of their government.

THE INDIAN PENINSULAS.

Position.—India and Indo-China lie in the southernmost portion of Asia, and are sheltered from northerly winds by the lofty mountains and plateaus on their northern borders.

Characteristics.—The **CLIMATE** is everywhere tropical or warm-temperate, with an abundance of moisture.

The **MINERAL WEALTH** of these peninsulas is great and varied, including coal, iron, copper, gold and diamonds.

Their **VEGETATION** is unsurpassed in luxuriance of growth, and in the variety of useful plants which are native.

Among the useful vegetable productions which are natives of these peninsulas, are the teak, one of the most valuable of timber-trees; ebony, gutta-percha, indigo, camphor and sandal-wood; cotton, rice, and the sugar cane.

The bread-fruit, the cocoa-nut; the banana, orange, sweet potato and

Questions.—Where is the Empire of Japan, and what are the characteristics of the country? What are the principal cities of Japan? What can you say of Tokio? Of Kioto? Of Osaka? What two smaller places are of interest, and why? What can you say of the people of Japan?

What is the position of India and Indo-China? Describe their climate and natural wealth. Name some of the useful vegetable productions.

yam; a great variety of fragrant gums and spices, the latter including cloves, nutmegs and cinnamon; and a large number of fruits of the cucumber, melon, and gourd kinds, are also indigenous.

BRITISH POSSESSIONS IN THE INDIES.

Extent.—The great peninsula of India, the Island of Ceylon, the western coast of Indo-China, and the south-western part of the Malay peninsula, belong to the United Kingdom, and form parts of the British Empire.

The Trade of the British possessions is immense. The exports include cotton, rice, sugar, indigo, tobacco, opium, muslins, carpets and shawls from India; cinnamon and coffee from Ceylon; and teak-timber, cloves, mace, sago and gutta-percha from the coast territories in Indo-China.

The opium goes chiefly to China, the other exports to Europe and the United States.

Cities.—**BOMBAY,**

CALCUTTA and **MADRAS**, the capitals of the three principal divisions of India, are the great centres of foreign trade.

Calcutta is the seat of government for all of the British possessions in Eastern Asia.

LUCKNOW, PATNA, and BENARES are the principal centres of trade for the Ganges basin.

Benares is the most holy city of the Hindoos, and the chief seat of native learning, religious influence, and arts.

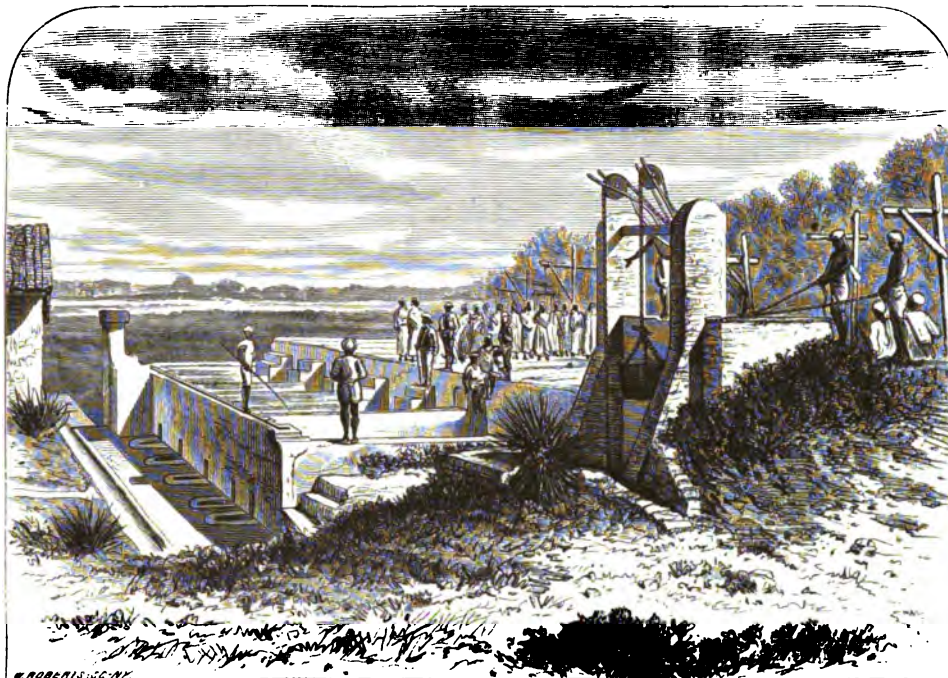
HYDERABAD is the capital of a native principality, and the stronghold of Mohammedanism in India.

COLOMBO, in Ceylon, and *Singapore*, on a small island at the southern extremity of the Malay peninsula, though smaller cities, are commercial ports of great importance.

The **Government** of the British possessions is on the same plan as that of the Dominion of Canada (page 55). The Governor-General resides at Calcutta.

The plains of India, like the plains of China, were the abode of a populous and civilized nation at the earliest period of history.

Questions.—What are the British possessions in this part of Asia? What is the extent of their trade? What are their chief exports? Where are these articles sold? What are the three great commercial emporiums of British India? What are the principal centres of inland trade? What is the especial interest of Benares? What is the importance of Hyderabad? What commercial port of importance on the British island of Ceylon? What one south of the Malay peninsula? What can you say of the government of the British possessions? How long have the plains of India been occupied by a civilized people?



MANUFACTURING INDIGO.

The Hindoos, surrounded by almost impassable mountains, like the Chinese, confined themselves to their own domain, and had little influence on the surrounding nations. The Buddhistic religion, which originated among them, has, however, spread over nearly all of Eastern Asia.

NATIVE KINGDOMS IN THE INDIES.

Cashmere, Nepaul and Bhotan are native principalities in the slopes and valleys of the Himalayas.

Cashmere is under the protectorate of British India. It is famous for the beautiful shawls which are manufactured by its people, from the wool of the Cashmere goat, and exported in large numbers.

Burmah, Siam and Anam occupy the larger part of Indo-China. Their productions are the same as those of British India.

SIAM has a considerable trade, the exports being rice, tobacco, sugar, and spices.

BANGKOK, the capital of Siam, is the most populous city of Indo-China.

Lower Cochin-China, situated about the mouth of the Mekong River, belongs to the French.

SAIGON, its capital, is an important commercial port, connected with Singapore by a line of steamships.



SCENE IN THE COFFEE HILLS OF YEMEN.

WESTERN TURKESTAN.

Independent Western Turkestan occupies the highlands and low plains between the plateau of Pamir and the Caspian Sea.

The eastern valleys are highly productive and beautiful, but elsewhere the country consists of steppes and deserts, with fertile lands only along the course of the rivers. The larger part of the inhabitants are nomadic herdsmen.

The territory of independent Turkestan is constantly being reduced by Russian conquests on its northern borders. It is but few years since the whole basin of the Sir Daria, which now forms the province of Russian Turkestan, was independent.

Questions.—What countries are situated in the Himalayas? What can you say of Cashmere? What countries occupy the main part of the peninsula of Indo-China? Which is of most importance? What is its chief city? What possessions have the French in Indo-China? What is the importance of their capital?

What region is occupied by Turkestan? What is the character of this country? By whom is the larger part peopled? What occupies the fertile lands?

Khanats.—The fertile lands are occupied by small States called Khanats. They often consist of a single city and its suburbs, whose khan (chief) claims authority over the nomadic tribes in the neighborhood.

BOKHARA, in the eastern part of the basin of the Amoo Daria, is the most extensive, rich and powerful of the khanats. It has a large area of fertile land, and produces considerable quantities of rice, cotton, silk, wool and morocco.

The Bokharese, like the Greeks, are a commercial people. They carry on a large trade in the produce of their own country, and transport, by caravans, the larger part of the merchandise passing between China and India and the countries of Western Asia.

COUNTRIES OF IRAN.

Afghanistan and Beloochistan occupy the eastern part of the table-land of Iran.

The barren plains, which form much the larger part of their area, are peopled only by nomadic tribes.

The fertile valleys in the mountainous regions are occupied by a settled population. They contain large cities, the most populous and important of which are

CANDAHAR, HERAT, and Cabool, all in Afghanistan.

The city of Cabool, at the head of the principal route, through the mountain borders of the plateau, to India, is a stopping-place for caravans engaged in the trade with India.

Persia occupies the middle and westerly parts of the table-land. It has large areas of cultivable land, in the mountainous regions which form its borders; but the interior is barren, with only occasional small tracts of fertile country.

Persia has a considerable trade, the leading exports being perfumeries, cotton, raw silk and the eggs of the silk-worm moth.

TEHERAN is the capital of Persia. **TABRIZ** is the commercial metropolis and the entrepôt of European trade. **Meshed** is largely engaged in the manufacture of shawls and carpets.

Questions.—Describe the chief Khanat of Turkestan. What can you say of Bokharese?

Describe Afghanistan and Beloochistan. What is the importance of Cabool? What is the character of Persia? What is the extent of its trade and the character of its exports? What are its principal cities, and in what industries are they chiefly engaged?

ARABIA.

Characteristics.—Arabia is a desert plateau, with fertile lands only on some of its borders and in the mountainous regions of the interior.

The most favored portion are Yemen, or happy Arabia, in the south-western, and Oman, in the south-eastern part.

The FERTILE LANDS in the coast regions yield coffee, fragrant gums and spices, dates, figs, grapes and other fruits, and are occupied by a number of independent States.

The DESERT PLAINS of the interior have occasional oases, on which the date grows; but in general they yield only a scanty growth of herbage and stunted prickly bushes. These furnish food for the herds of camels, sheep, and goats raised by the nomadic tribes, who are the only inhabitants.

Along the western coast is the HEDJAZ, the "holy land" of the Mohammedans, containing the sacred cities of Mecca and Medina. It is under the protectorate of the Sultan at Constantinople.

Cities.—MUSCAT, the capital of Oman, is one of the greatest commercial centres of Western Asia.

Mocha, on the Strait of Bab-el-Mandeb, is the market for the coffee and spices of Yemen and of the adjacent parts of Africa.

Mecca, the birth-place of Mohammed, and Medina, his burial-place, are constantly visited by pilgrims from even the most distant Mohammedan countries.

ASIATIC TURKEY.

Position and Characteristics.—Asiatic Turkey occupies the mountain lands of Asia Minor and Armenia; the low plains of the Tigris and Euphrates basin; and the plateau of Syria, east of the Mediterranean.

Soil and Vegetation.—The mountainous regions contain numerous valleys and small plains of the greatest fertility; and on the mountain slopes are forests of limited extent.

The plateau of Syria, and the plains of the Euphrates basin, though covered with verdure during the spring and autumn rains, are parched and bare in the drought of summer, and are inhabited only by nomadic herdsmen.

The CHIEF PRODUCTIONS of the fertile lands are olive-oil, silk, opium, tobacco; and grapes, figs, almonds, and other fruits of warm-temperate regions.

The TRADE is considerable, and is carried on mainly by the Armenians, who are the most commercial people of Asiatic Turkey. The chief exports are olive-oil, dye-stuffs, dried fruits, raw silk, wool and opium.

Questions.—What is the character of Arabia generally? Describe the fertile lands. The desert plateaus. What and where is the Hedjaz? What are the chief cities of Arabia? What can you say of Muscat? Of Mocha? Of Mecca and Medina?

What regions are occupied by Asiatic Turkey? Describe the different regions? What are the chief productions? What are the exports?

Cities.—DAMASCUS, the oldest city in existence, is celebrated for its extensive caravan trade, and for its manufactures of silk and metallic wares.

BAGHDAD, also the centre of a great caravan trade, is the chief seat of oriental arts and learning.

SMYRNA and BEIRUT are the principal seaports of Asiatic Turkey.

Note.—The oldest States of which history makes mention, excepting Egypt, were situated in the plains of the Euphrates and Tigris, and in the valleys and mountains of Syria.

On the eastern borders of the Mediterranean is the "Holy Land," which was the home of the Jews and the seat of the mighty monarchies of David and Solomon, and where the important events recorded in the Bible occurred.

Jerusalem, the magnificent capital, was situated in the mountain region between the Mediterranean and the Dead Sea.

GREAT CITIES OF ASIA.

The great cities of Eastern Asia, in the order of their population, are the following:—

1. Over 1,000,000. SU-CHAU, PEKING, CANTON, KING-TE-CHING, CHANG-CHAU.
2. 500,000 and above. TOKIO, BOMBAY, FUH-CHAU, NANKING, BANGKOK.
3. 400,000, and above. OSAKA, CALCUTTA, HYDERABAD, NING-PO, MADRAS.

The largest cities of Western Asia do not exceed 200,000. In the order of their population they are the following:—

DAMASCUS, BAGHDAD, SMYRNA, TEHERAN, TABRIZ, BEIRUT.

COMMERCIAL REVIEW OF ASIA.

Commercial States.—The most commercial countries of Asia are British India, China, and Japan, in Eastern Asia; and Bokhara, Persia, and Oman, in Western Asia.

Exports.—The exports of these countries consist mainly of raw materials, including tea, silk, cotton, indigo, rice, coffee, opium, fragrant gums, and spices.

Some manufactures are exported, chiefly silks and porcelain from China; muslins and shawls from India; and shawls, carpets, and perfumes from Persia.

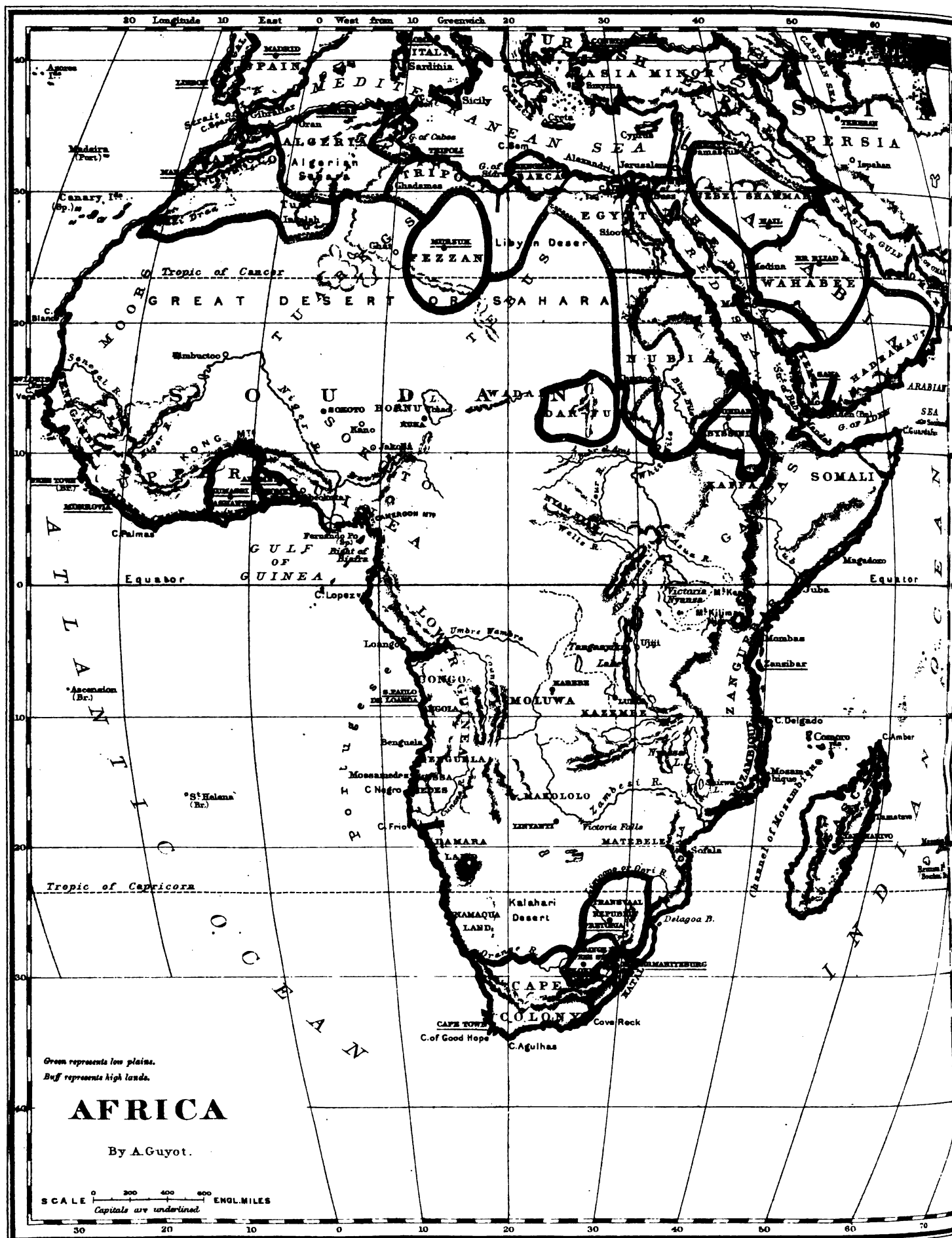
Commercial Ports.—The great commercial ports of Asia are Canton and Shanghai, in China; Calcutta, Bombay, and Madras, in India; and Muscat, in Oman.

The chief centres of overland trade are Bokhara, Yarkand, and Kiakhta, in Eastern Asia; and Damascus, Baghdad, and Tabriz in Western Asia.

Questions.—What are the four leading cities of Asiatic Turkey? What can you say of Damascus? Of Baghdad? Of Smyrna and Beirut? What was the importance of this region in ancient times? What part of it is especially interesting to us, and why?

Name the great cities in each of the three classes given above. Describe the location of each, and state some fact of interest in connection with it. Name and describe the largest cities of Western Asia.

What are the most commercial countries of Asia? What are their exports? What are the great commercial ports? Name the centres of overland trade?



AFRICA.

MAP STUDIES.

Position.—Between what two parallels does nearly the whole of Africa lie? Between what two meridians? What meridian crosses Africa near the middle? What continent lies at the north of Africa?

Outline.—How is Africa connected with Asia? What oceans border upon Africa? What seas? What strait connects the Mediterranean Sea with the Atlantic? What waters connect the Red Sea with the Indian Ocean?

What cape forms the extreme northern point of Africa? The southern point? The eastern point? The western point? What cape south of the Strait of Gibraltar?

Where is the Cape of Good Hope? Where is Cape Negro? Cape Lopez? Cape Palmas? Cape Sem? What two gulfs between Cape Sem and Cape Bon? What great gulf between Cape Palmas and Cape Lopez? What is the easternmost part of the Gulf of Guinea called?

What great island east of Southern Africa? What separates Madagascar from the continent? What islands west of Northern Africa? What group of islands north-west of Madeira? What island east of Cape Guardafui?

Surface.—Which is most extensive in Africa—highland or lowland? Where are the only extensive low plains? What mountains between Cape Bon and the Atlantic coast? What mountains north of the Gulf of Guinea? In what direction do both these mountain systems extend?

What high plateaus lie west and south-west of the Strait of Bab-el-Mandeb? What high mountain peaks lie south of the plateaus of Kaffa? What mountains on the coast at head of the Bight of Biafra? Where are the Atlas Mountains? Kong Mountains? Cameroon Mountains?

Rivers and Lakes.—What great river of Eastern Africa enters the Mediterranean? Describe the course of the Nile. What large river enters the Bight of Biafra? Describe its course.

What river enters the sea south of Cape Lopez? Describe the course of the Congo.

What large river enters Mozambique Channel? Describe the course of the Zambesi. What river enters the Indian Ocean south of the Zambesi? What river enters the Atlantic still farther south?

What two great lakes discharge their waters into the Nile River? What large lake south of Albert Nyanza? What lake of considerable size south-east of Tanganyika? What lake in the low plains east of the Niger River?

Countries and Cities.—What countries of Africa border upon the Mediterranean Sea? Which of these are partly in the Atlas Mountain region?

What and where is the capital of Egypt? What seaport north-west of Cairo? What and where is the capital of Barca? Of Tripoli? Of Tunis? Of Algeria? Of Morocco? What city in the highlands north-east of the city of Morocco?

What is south of the Mediterranean countries? Where is Fezzan? What important city has it? What city in the desert directly west of Murzuk? What people occupy the western part of the Great Desert? The middle part? The eastern part?

What countries on the Nile south of Egypt? Where is Abyssinia? What names are given to the coast region between Cape Guardafui and the Limpopo River? To what nation does the southern part of this region belong? To whom does the northern part belong? What important town on an island off the coast of Zanguebar?

What is the most southern country of Africa? What and where is the capital of Cape Colony? Where is Natal? Where is the Orange River Free State? Where is the Transvaal Republic?

What is the coast region of Western Africa, north of the equator, called? Where is Lower Guinea? What countries in Upper Guinea? Where is the city of Aboluta? Monrovia? Freetown? Where is Senegambia?

To what nation does the coast region between the Congo River and Cape Frio belong? What is the capital of the Portuguese possessions?

What name is given to the interior, south of the Great Desert? In what part of Soudan is the kingdom of Sokoto? Bornu? Darfur? Where is the city of Jakoba? Sokoto? Kano? Timbuctoo? What city near the centre of Madagascar?

TO DRAW THE MAP OF AFRICA.

Construction Lines.—Draw five horizontal lines, and cross them by five vertical lines, all separated by equal distances. Number them as in the diagram. M = the space separating the lines = 1,000 miles.

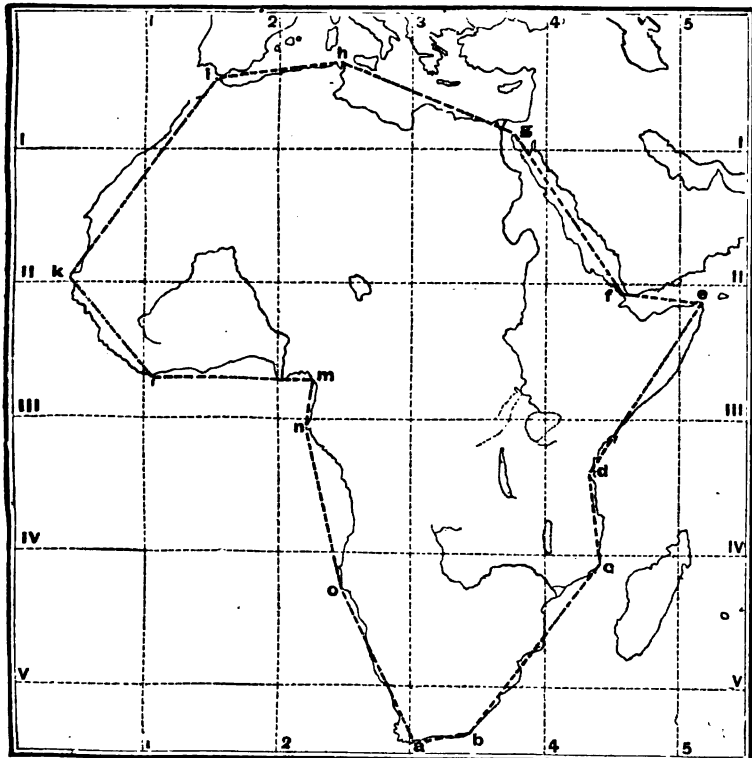
Contour.—Mark the position of Cape Agulhas (a) on line 3, at nearly $\frac{1}{2}$ M below line V; Cove Rock (b), nearly $\frac{1}{4}$ M to the right of a and a little above it; Mozambique (c), Zanzibar (d), and Cape Guardafui (e). Connect these points, and draw the south-eastern coast.

Mark the position of the Strait of Bab-el-Mandeb (f), the Isthmus of Suez (g), Cape Bon (h), and the Strait of Gibraltar (i). Connect, and draw the northern and north-eastern coasts.

Mark the position of Cape Verde (k), Cape Palmas (l), the Cameroon Mountains (m), Cape Lopez (n), and Cape Frio (o). Connect, and draw the western coast.

Exercise on Distances.—How far is it from Cape Bon to Cape Agulhas? From Cape Verde to Cape Guardafui? How much farther west is Cape Verde than Cape Bon? How much farther south? How much farther east is Cape Guardafui than the Cape of Good Hope? How much farther north?

What is the distance from Cape Lopez directly east to the Indian Ocean? How much farther east than the Strait of Gibraltar is the Isthmus of Suez? How long is the island of Madagascar?



DESCRIPTION OF AFRICA



I. SURFACE.

General Character.—Africa is a vast plateau, the southern half of which has about double the elevation of the northern half. The only extended low plains are in Northern Africa.

There is no great continuous mountain system crossing the continent; but a broad swell of land, considerably higher than the adjacent parts of the plateau, extends along the eastern coast from Cape Agulhas nearly to the Mediterranean.

The highest parts of this eastern swell are the plateaus of

Questions.—Of what does Africa consist? Describe the principal elevated region of the continent. Where and how high is the highest part of the eastern swell?



SCENE ON THE RIVER NILE.

Abyssinia and Kaffa, from six thousand to seven thousand feet in altitude, surmounted by mountains reaching fifteen thousand feet.

Mountains.—The most extended mountain systems are the Atlas Mountains, south of the Mediterranean; and the Kong Mountains, north of the Gulf of Guinea. Their highest peaks are only about thirteen thousand feet above the sea level.

On the eastern swell are several short ranges and groups of mountains. The highest is the volcanic group near the equator, containing Kenia and Kilima-Njaro, the loftiest peaks of the continent. They have an altitude of about nineteen thousand feet.

The **Sahara** consists of plains of hardened clay or sand, and of naked rock, varied by low mountains and hills; and vast fields of loose sand, drifted into hillocks by the powerful winds which sweep over it.

II. RIVERS AND LAKES.

Sources of Streams.—All the great river systems of Africa derive their waters from that part of the continent lying between 16° north and 20° south latitude. The Orange and Limpopo are the only considerable streams originating outside of this region.

Systems of Rivers.—Four great systems include nearly all the large streams of Africa. These are the Nile and the Niger, in Northern, and the Congo and the Zambesi, in Southern Africa. The Nile is one of the longest streams on the globe, and the Congo one of the most copious.

The Nile is fed by a number of great lakes near the equator. During the rainy season they are swelled to their greatest height, and so increase

Questions.—What and where are the two principal mountain systems of Africa? Where are there shorter ranges and groups of mountains? Where and what are the highest peaks? Describe the surface of the Sahara.

Where do all the great streams in Africa originate? What are the only important streams outside this region? Name the four great river systems of Africa. How are the Nile and the Congo distinguished? Describe the overflow of the Nile.

the volume of the river that it overflows its banks throughout its lower course. The inundation lasts from the end of June to the end of November, but is at its height in September.

Lakes.—The great lakes of Central Africa are among the largest bodies of fresh water on the globe.

The largest, as far as known, are Victoria Nyanza and Albert Nyanza, which discharge their waters into the Nile.

Lake Tchad, in a low plain south of the Sahara, has no known outlet.

III. CLIMATE.

Temperature.—Africa is the hottest of the continents, almost its entire extent having a tropical temperature. The extreme southern and northern portions are warm-temperate.

Moisture.—The middle part of Africa, from 16° north to 20° south latitude, has the regular rainy and dry seasons of the Torrid Zone; but it has less moisture than South America, on account of the highlands adjacent to the eastern coast.

Beyond these parallels, both north and south, little rain falls, except in the coast regions.

The Sahara, in particular, is almost rainless, for the easterly winds on that part of the continent are dry, as they reach it only after crossing the desert plains and plateaus of Western Asia; and the rocky, sandy surface, under a nearly vertical sun, so heats the air that it absorbs all the clouds brought into it by winds from the Mediterranean or the Atlantic.

The Mediterranean shores and the coasts of South Africa receive abundant winter rains.

IV. VEGETATION AND ANIMALS.

The **Moist Tropical Region** of Africa has a luxuriant vegetation.

The forests are somewhat similar in character to those of South America; but are less extensive, and are separated by vast treeless plains covered with gigantic reeds, grasses, and other herbaceous plants.

On the northern and southern borders of this region, where the moisture is less abundant, there are extensive tracts of country covered with stunted thorny bushes. Among these are varieties of acacia, from which gum-arabic is obtained.

On the Abyssinian plateau are native groves of the coffee tree, and a great variety of trees yielding fragrant gums and spices.

The **Sahara** has little vegetation, except in the oases. These are usually covered with groves of the date-palm, and many are very beautiful.

The oases are valleys among the rocky ridges which cross the Sahara, or small plains below the general level, which are watered by springs or wells.

They are largest and most numerous in the middle part, between Lake Tchad and the Mediterranean, and in the lowlands south of the Atlas Mountains.

Questions.—What is the size of the lakes of Africa? Which are the largest? For what is Lake Tchad remarkable?

What is the temperature of Africa? Describe the distribution of rain. What is the driest portion? Why is the Sahara so dry? When does rain fall on the Mediterranean shores? What is the vegetation of the moist region of tropical Africa? Describe the borders of this moist region.

Describe the Sahara in regard to vegetation. What is the nature of the oases? Where are the oases largest and most numerous?

The **Kalahari Desert** is the name given to the dry plains in the interior of Africa, near the southern tropic.

Temperate Region.—The coastward slopes of the Mediterranean countries bear forests of oak, elm, chestnut, and pine; and the fruits and other cultivated plants of warm-temperate countries grow luxuriantly.

The coast region of South Africa has evergreen forests; and the vine, the olive, the orange, and other fruits, introduced from Europe and Asia, yield abundant crops.

The interior is remarkable for the great number of flowering plants, of the most gorgeous colors, which it produces, especially of the geranium, heath, and lily kinds. These all lose their foliage in the summer droughts, when the plains appear like a desert, but revive when the season of rain returns.

Animals.—Africa is the home of the largest and most powerful species of the animal kingdom.

The elephant, hippopotamus, rhinoceros, giraffe, lion, and leopard; the chimpanzee and gorilla; the crocodile, the largest of reptiles; and the ostrich, the largest of birds, are all natives of Africa.

Africa has also several varieties of wild oxen; and an immense number of antelopes, of many species.

The skins of the wild animals, the ivory furnished by the elephant and rhinoceros, and the plumes of the ostrich and some other birds, are among the most valuable of the productions of Africa.

V. INHABITANTS.

North Africa.—The inhabitants of the Sahara and the Mediterranean countries belong to the white race, though some tribes are nearly as dark as the negroes.

A large part of the population are nomadic tribes of Moors, Arabs, Tuaregs, and Tebus.

Middle and Southern Africa is the home of the negro race, but great differences are manifested by the inhabitants of the different portions.

The most advanced tribes are those inhabiting the countries of Soudan, immediately south of the Sahara. They cultivate the soil, and show considerable skill in the working of iron, and in some other manufactures; and have organized governments, and cities of large population.

Most of the negroes south of Soudan are entirely savage, but along the eastern coast are several tribes who are nomadic herdsmen.

The African nations of the white race, and the negroes of Soudan are Mohammedans; but the savage races of Middle and South Africa have the most degrading forms of idolatry.

Questions.—Describe the dry lands of Southern Africa. What is the character of the vegetation in Cape Colony and the Mediterranean regions? Describe the animals of Africa?

To what race do the inhabitants of North Africa belong? What is the mode of life of a large part of the population? What race inhabits Middle and Southern Africa? Where are the negro tribes most advanced in civilization? What is the condition of the most southerly negroes?

COUNTRIES OF AFRICA.

I. EGYPT AND ITS DEPENDENCIES.

Area, 659,100 sq. m. Pop. 8,000,000.

Position.—Egypt consists of the narrow fertile valley of the Nile, enriched by the annual overflow; and an expanse of desert land on each side of the Nile, with only occasional oases.

Nubia, like Egypt in character, and *Kordofan*, a more fertile country on the borders of the moist region, together with the adjacent parts of Soudan, belong to Egypt.

The **Chief Productions** of the Nile valley are wheat and other grains, cotton, indigo, and a variety of fruits.

Dates are the great staple of the oases, though grain, olives, apricots, and cloves are raised on the larger ones.

Egypt is the most commercial country of Africa, having a large trade by sea with the European countries, and by caravan with the countries of Central Africa. The leading exports are grain, cotton, indigo, and dates.

A canal across the isthmus of Suez connects the Red Sea with the Mediterranean, and is the principal route of trade between European countries and India.

Cities.—CAIRO is the capital of Egypt, and the great centre of trade, by way of the Nile, with the interior.

ALEXANDRIA is the greatest commercial centre in Africa, and the principal naval station of Egypt.

Khartoom has a large river trade in ivory and guma. *Sioot* is the entrepôt of caravan trade with Soudan.

Note.—The oldest civilized nation known to history peopled Egypt. The Nile valley is famous for its stupendous ruins of ancient temples, and for the pyramids and other remarkable works of its ancient inhabitants.

Egypt, though practically independent, and governed by its own hereditary princes, is nominally subject to Turkey, and forms part of the Turkish Empire. The ruler has the title of *Khedive*.

II. BARBARY STATES.

Area, 904,900 sq. m. Pop. 8,421,000.

Characteristics.—Marocco, Algeria, Tripoli, Tunis, and Barca are called the Barbary States, from the Berbers, their ancient people.

These countries include the Mediterranean shores west of Egypt, the fertile slopes of the Atlas region, and the northern portions of the Sahara, with numerous large oases, some of which are permanently inhabited.

The leading productions of the Atlas region are grain, the olive and vine, and the fig, apricot, peach, pomegranate, and other fruits of warm regions.

Dates are the great staple of Tripoli and of the oases south

Questions. Of what does Egypt consist? What countries belong to Egypt? What are the productions and the exports of Egypt? What are the largest two cities of Egypt? What can you say of Cairo? Of Alexandria? What historic interest attaches to Egypt?

What are the Barbary States? Why are they so called? Of what do these countries consist? What are the chief productions of the Atlas region? Of Tripoli and the oases?

of the Atlas region, the latter being often called the *Land of Dates*.

The Barbary States have a considerable trade by sea with Southern Europe; and a large caravan trade across the desert with Soudan, whence they bring gums, ivory, and ostrich plumes. The exports are grain, olive-oil, and dates.

Cities.—MAROCCO is the capital of the Empire of Marocco, and has large manufactories of leather.

FEZ is the chief commercial centre of the Empire, and the seat of a famous Moorish University.

Algiers is the capital and the chief centre of trade of Algeria.

TUNIS, the capital of Tunis, is one of the most commercial cities south of the Mediterranean.

Tripoli is the capital and commercial metropolis of Tripoli.

Benghazy, a place of considerable trade, is the capital of Barca.

Note.—Tripoli and Barca are subject to Turkey, to which Tunis only pays a tribute; Algeria belongs to France, and Marocco is independent. Barca has been, until recently, a part of Tripoli.

III. THE SAHARA AND SOUDAN.

The **Sahara** IS PEOPLED almost exclusively by nomadic tribes of Moors, Tuaregs, Tebus, and Arabs, who wander with their flocks and herds from oasis to oasis.

A few of the larger oases are permanently inhabited, and contain villages and cities of considerable population.

The main CARAVAN ROUTES across the Sahara are from Kano, through the central belt of oases, to Tripoli and Tunis; from Timbuctoo to Marocco, and from Kobbah to Egypt.

The EXPORTS are dates, ostrich plumes, gum-arabic, and salt. The last is obtained from mines at Taudeny and Wadan.

Ghat, in an oasis of the same name, is a meeting place for the caravans which take the central routes across the Sahara, and is the seat of a great annual fair.

Soudan is divided into a large number of kingdoms, the most advanced and powerful of which are Sokoto and Bornu.

In the middle and western countries the inhabitants are negro tribes, the highest of their race in civilization. In the eastern countries the ruling class are Arabs.

The countries of Soudan are connected with the Barbary States and Egypt by caravan trade. Ivory, palm-oil, and gums are their chief exports.

JAKOBA, a city of 150,000 inhabitants, is the most populous place in Africa south of the Mediterranean countries.

Kano, Sokoto, and Timbuctoo are centres of a large caravan trade.

Questions.—What is the extent and character of the trade of the Barbary States? What are the chief cities of the Barbary States? What can you say of Marocco? Of Fez? Of Algiers? Of Tripoli? What is the importance of Tunis? What are the political relations of the Mediterranean countries?

Describe the people of the Sahara. Where are the principal caravan routes across Sahara? What are the exports? What is the chief town of Sahara?

Of what does Soudan consist? Who are the inhabitants? What are the exports? To what countries are they sent? What are the chief towns?

IV. COUNTRIES OF EASTERN AFRICA.

Abyssinia and Kaffa are occupied by a number of small native kingdoms.

Coffee, ivory, and gums, sent chiefly to Egypt, are the principal exports. Gondar is the most important town.

The **Coast Regions**, from Cape Guardafui to Magadoxo, are subject to the Imaum (Sultan) of Muscat; from Magadoxo to Cape Delgado, to the Sultan of Zanzibar; and the more southerly portion of the coast to the Portuguese.

The Portuguese possessions export rice, ivory, gums, and gold dust; the more northerly region, rice, sugar, molasses and fish.

Zanzibar and Mombas, on islands of the same name, are the most important towns on the eastern coast of Africa.

Madagascar is rich in minerals, and has a soil of great fertility. It is rapidly advancing in civilization under the instruction of Christian missionaries.

V. COUNTRIES OF SOUTH AFRICA.

Cape Colony and Natal are British Colonies.

Diamonds are found in Cape Colony on the Vaal River. Natal has extensive coal-fields.

Only the coastward slopes are cultivable, but the interior is well adapted to stock-raising, which is the leading pursuit of the colonists.

The chief exports are wool, wine, and diamonds from Cape Colony; and wool, sugar, and coffee from Natal.

Cape Town, the only populous city, is the most important commercial centre in Southern Africa.

Dutch States.—The Orange River Free State and the Transvaal Republic have but a sparse population. They are peopled by Dutch farmers, the descendants of the original colonists of the Cape of Good Hope.

Stock-raising is almost the sole pursuit of the people.

VI. COUNTRIES OF THE WEST COAST.

Senegambia is rich in gold, iron ore, and gum-producing trees. Its chief exports are ivory, wax, gums, hides, and gold.

England, France, and Portugal all have trading stations in Senegambia.

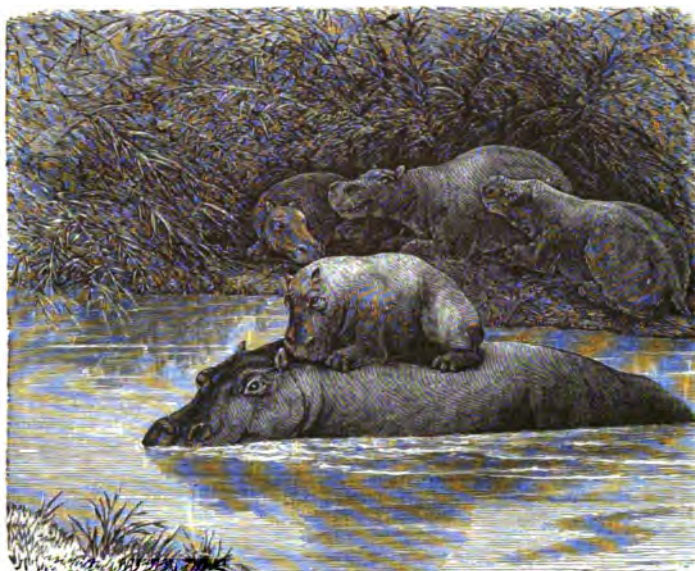
Questions.—Describe Abyssinia and Kaffa. To whom are the coast regions of Eastern Africa subject? What are their exports? Their chief towns? What can you say of Madagascar? How is Soudan divided? Who are the inhabitants? With what countries does Soudan trade? What are its exports? What are the chief cities of Soudan? Describe Cape Colony and Natal. What is the importance of Cape Town? Describe the Dutch States of South Africa. Describe Senegambia.

Sierra Leone is a British colony. It is peopled by negro immigrants from Canada and Jamaica, and African negroes rescued by British cruisers from ships engaged in the slave trade.

Freetown is the capital and the principal trading station of the colony.

Liberia is a republic, founded as a home for American negroes who were once slaves.

The country is highly productive, yielding cotton, coffee, sugar-cane, rice, palm-oil, indigo, and millet or Guinea corn. Monrovia is the capital of Liberia.



A HIPPOPOTAMUS FAMILY.

Ashantee, Dahomey, and Yoruba are native kingdoms in a nearly savage state.

The countries are important chiefly on account of their exportation of gold dust, ivory, and palm-oil; and their coast is often designated the "gold coast."

ABEOKUTA, a negro town of over one hundred thousand inhabitants, is the centre of a considerable caravan trade.

Portuguese Possessions.—The coast regions between the Congo River and Cape Frio are subject to the Portuguese, who have a number of trading stations on the coast.

San Paulo de Loanda is the capital of the Portuguese possessions, and their chief commercial establishment.

LARGE CITIES AND COMMERCE OF AFRICA.

Cities.—The largest cities of Africa, in the order of their population, are the following:

1. Above 200,000. **Cairo, Alexandria.**
2. Above 100,000. **JAKOBA, TUNIS, MAROCCO, FEZ, ABEOKUTA.**
3. Above 30,000. **Algiers, Khartoom, Tripoli, Sioot, Cape Town.**

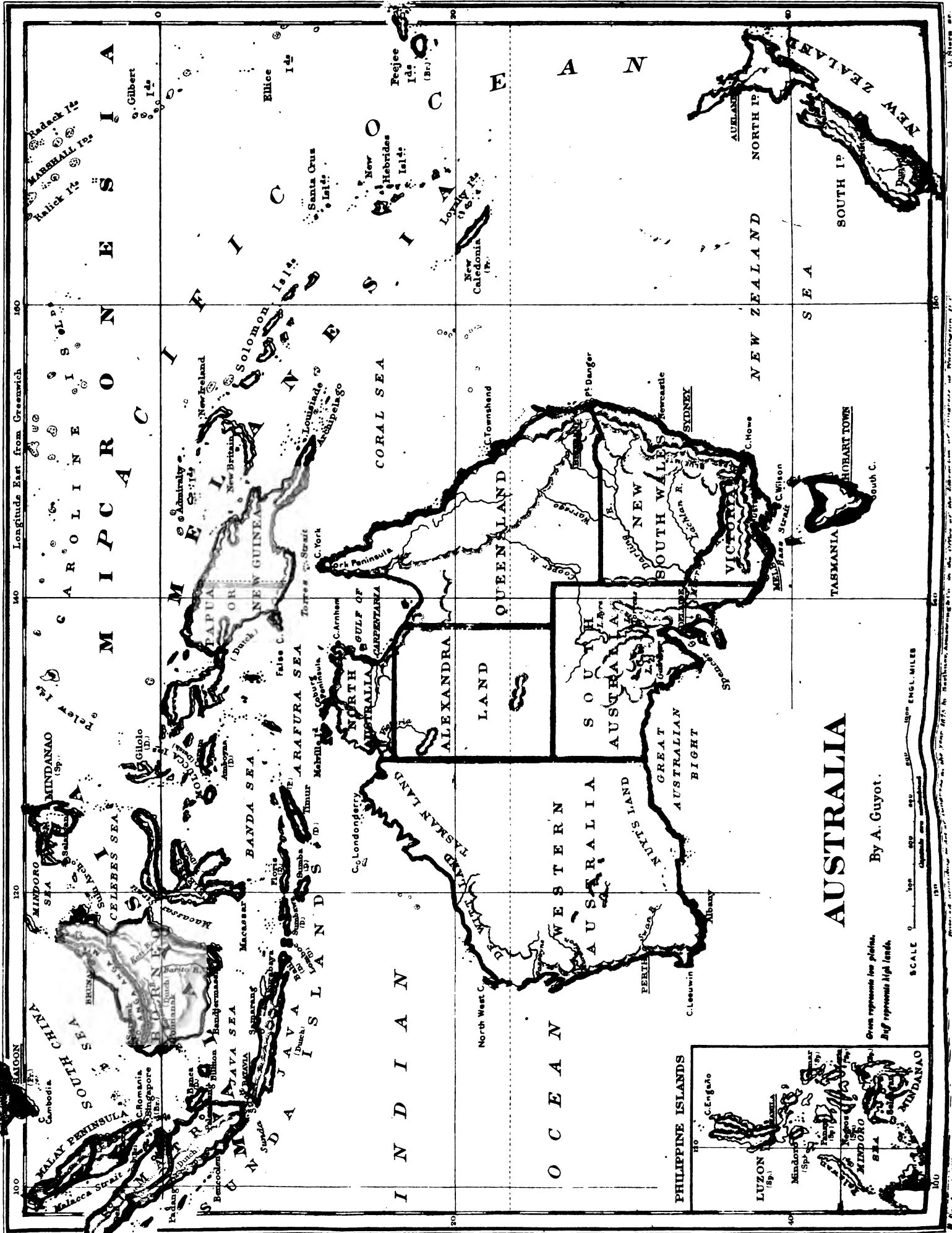
Commercial Review.—The most commercial countries of Africa are Egypt, the Barbary States, Cape Colony, Senegambia, and Sokoto in Soudan.

The exports of Africa are almost wholly of raw materials. They include grain, from Egypt and the Atlas region; dates and ostrich plumes, from the Barbary States and Sahara; ivory, gums, palm-oil, and gold dust, from Soudan and the Guinea coast; and cotton, wool, and hides, from Cape Colony.

Questions.—Describe Sierra Leone. Describe Liberia. Describe the native kingdoms on the coast. The Portuguese possessions on the west coast. Name, in the order of their population, the cities of Africa having over 100,000 inhabitants.

Name those between 100,000 and 30,000. Describe the situation of each, and state some important fact concerning it.

Which are the most commercial countries of Africa? What is the character of the exports of the continent? Name the leading exports, and state from what region they come.



AUSTRALIA

By A. Guyot.

Green represents low plains.
Blue represents high lands.

SCALE 0 100 200 300 400 500 600 700 800 900 1000 ENGL. MILES

MAP STUDIES.

Position and Outline.—Between what parallels and meridians does Australia lie? *Ans.* Between the parallels of 10° and 40° south latitude, and the meridians of 115° and 155° east longitude. By what oceans is Australia surrounded?

What is the most northern point of Australia? The most southern? The most eastern? Where is North-west Cape? Cape Leeuwin?

What strait separates Tasmania from the continent? What strait between Cape York and Papua? What great gulf indents the northern coast of Australia? What great indentation on the southern coast?

What great island lies north of Eastern Australia? What cluster of islands near the north-western part of Papua? What two large islands between the Moluccas and the Malay peninsula?

What great islands west and south of Borneo? Name the largest three islands lying east of Java. What large group of islands north-east of Borneo?

What islands are crossed by the equator? What name is given to the whole great archipelago lying between Australia and Southern Asia? What island south of Eastern Australia? What large group of islands south-east of Australia?

Surface.—In what part of Australia are the largest mountain ranges. Name them. Which is most extensive in Australia, low plains or highlands? Which is highest, the northern or the southern part of the continent?

What is the surface of New Zealand? Of Tasmania? What is the surface of all the great islands of Malaysia?

Rivers and Lakes.—In what part of Australia are all its long rivers? Whence do they derive their waters? What is the principal stream? What is the largest tributary of the Murray? In what part of Australia are the largest lakes? Name the three principal ones. What stream enters Lake Eyre?

Countries and Cities.—What three divisions of Australia border upon the Pacific? What three are in the middle part of the continent? What is the remaining division?

What and where is the capital of Victoria? Of South Australia? Of New South Wales? Of Queensland? Of Western Australia? Of Tasmania?

In what part of Java is Surabaya? Batavia? Where is Manila? Palembang? Macassar? Amboyna?

TO DRAW THE MAP OF AUSTRALIA.

Construction Lines.—Draw, at equal distances apart, three horizontal lines, and cross them by four vertical lines. Number them as in the diagram. M = the space between the lines = 1,000 miles.

Contour.—Mark the position of Point Danger (a) at $\frac{1}{4}$ M below line II, and $\frac{3}{4}$ to the right of line 3.

Mark Cape York (b) on line I, and nearly $\frac{1}{2}$ M to the left of line 3; and North-west Cape (c) at $\frac{1}{4}$ M above line II, and $\frac{1}{2}$ M to the left of line 1.

Connect these points, and draw the north-eastern and northern coasts.

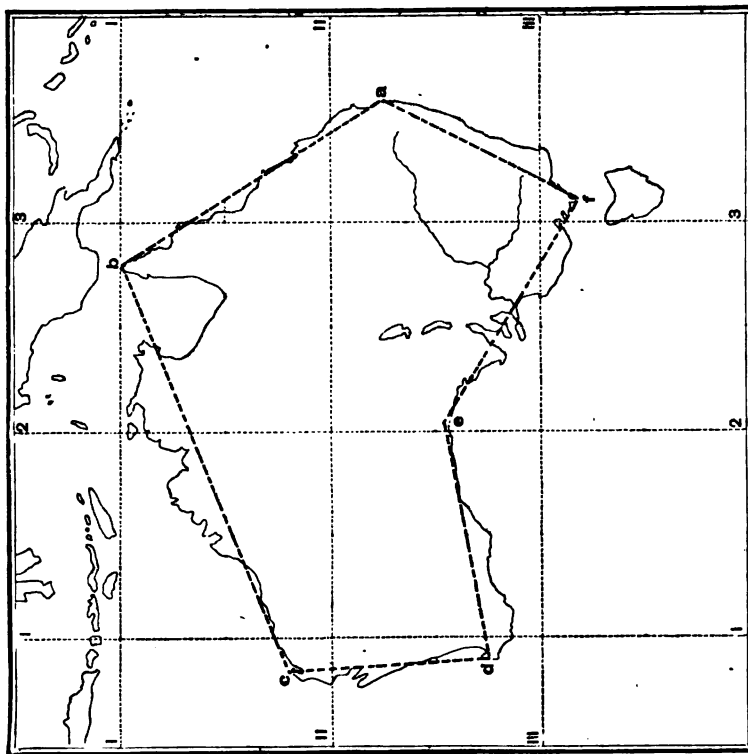
Mark the position of Cape Leeuwin (d) at one M below North-west Cape, and a trifle nearer line 1.

Mark the northernmost point of the Great Australian Bight (e) at $\frac{3}{4}$ M below line II, and a little to the right of line 2.

Mark Cape Wilson (f) at $\frac{1}{4}$ M below line III, and $\frac{1}{2}$ M to the right of line 3. Connect these points and draw the western, southern, and south-eastern coasts.

Exercise on Distances.—What is the greatest breadth of Australia from north to south? What is the breadth of the extreme western part of the continent? Of the middle part? What is the greatest length of the continent from east to west?

How much farther west is Cape North-west than Cape York? How long and how wide is the Gulf of Carpentaria? About how long and how wide is the Island of Tasmania?



DESCRIPTION OF AUSTRALIA.



AUSTRALIANS HUNTING THE KANGAROO.

I. SURFACE, RIVERS, AND LAKES.

Surface.—Australia consists mostly of a great plain, which, near the north-eastern, northern, and western coasts rises into a low plateau.

The only important mountain region of the continent is in the south-east, extending along the coast from Sandy Cape nearly to the mouth of the Murray River. The highest part is the Australian Alps, with an average altitude of five thousand feet; the loftiest peaks reaching seven thousand feet.

Short ranges and groups of low mountains occur in the

Questions.—Of what does Australia consist? Describe the only important mountain region. Where are there subordinate mountain chains?



MALAYS OF THE CORAL ISLANDS.—SURF-BATHING.

region north of Spencer Gulf, and on the low plateaus in the western and northern part of the continent.

Rivers.—The Murray, and its tributaries, which drain the highlands on the eastern and southern coasts, are the largest rivers of Australia, and form its only great river system.

The other streams of the interior become nearly or quite dry during the summer; and the streams draining the coastward slopes are generally navigable but a short distance.

The **Lakes** are mostly situated in the small mountainous region north of Spencer Gulf. Many become entirely dry or are converted into marshes during the summer drought. Lakes Eyre, Torrens, and Gairdner are the largest.

II. CLIMATE, VEGETATION, AND ANIMALS.

Temperature.—The larger part of Australia has a tropical temperature, though only the northern part is situated in the Torrid Zone. The region south of the Lachlan and Lower Murray has the coolest and most agreeable temperature.

Moisture.—The northern part of the continent has the regular rainy and dry seasons of the Torrid Zone.

The middle part has generally a scarcity of moisture. Violent showers occur in some parts of the year; but the water flows away so rapidly that, while the streams are filled to overflowing and the marshes converted into lakes, the ground is dry almost as soon as the rain has ceased.

The south-eastern part has plentiful rains during autumn, winter, and spring, with dry summers.

Vegetation.—1. **FOREST REGIONS.**—The Murray basin, and the coast regions, excepting that between Cape Leeuwin and Spencer Gulf, are well wooded; but there are nowhere such extensive and dense forests as can be found in all the other continents.

Questions.—Describe the rivers of Australia. The lakes. What is the temperature of Australia? Describe the distribution of moisture in the different parts of the continent. Describe the forest regions of Australia.

The most luxuriant forests are in the tropical region on and near the northern coasts.

The forests, generally, are open and free from undergrowth, have but a scanty foliage, and are separated by vast prairies covered with a rich growth of grass and herbage.

2. **STEPPES AND DESERTS.**—The interior of Australia to the west and north of the Murray basin, so far as known, consists mainly of steppes and deserts. In some places are vast thickets of stunted, thorny bushes, forming what is known as the *scrub*.

The most favored portions yield, during the rainy season, a fine growth of grasses and flowering plants, which die to the roots during the long droughts; but large areas are entirely destitute of useful plants.

There are few native food-plants, but the grains and fruits of other continents have been introduced, and succeed well.

Animals.—The animals of Australia are unlike those of any other continent. The largest are the kangaroos, of which there are many kinds.

Australia has no monkeys, no large beasts of prey, and no native horses, cattle, sheep, goats, antelopes, or deer.

III. AUSTRALIAN COLONIES.

Area, 2,945,000 sq. m. Pop. 1,565,000.

Divisions and Inhabitants.—The whole continent of Australia and the island of Tasmania belong to Great Britain.

Australia includes the colonies of Victoria, New South Wales, Queensland, South Australia, and Western Australia; and the unsettled districts of North Australia and Alexandra Land. Tasmania is a separate colony.

The white inhabitants are chiefly immigrants from the British Isles; and, excepting in Victoria and New South Wales, are located almost exclusively in the coast regions. The native people are savages, and are rapidly decreasing in numbers.

Mineral Wealth.—Australia is one of the richest of the continents in valuable minerals, especially in gold, which is found in great abundance about the upper course of the Murray River.

Copper is plentiful in South Australia, and iron and coal in the south-eastern coast regions and in Tasmania.

Occupations, Productions and Trade.—The southern portion of the Murray basin and the adjacent coast regions are generally favorable to agriculture, and capable of yielding all the staple productions of temperate and of warm climates.

The people, however, are more largely engaged in stock raising and wool-growing than in the cultivation of the soil; and immense numbers of sheep, cattle, horses, and swine are raised.

The trade of the south-eastern colonies is large; wool, hides, tallow, salted meats, and wheat being the chief exports.

Cities.—MELBOURNE, the capital of Victoria, is the greatest com-

Questions.—Describe the vegetation of the interior. Describe the animals of Australia. To whom does Australia belong, and what are its political divisions? Who and where are the white inhabitants? Describe the mineral wealth of Australia.

What portions of the continent are favorable to agriculture? What are the leading pursuits? What animals are reared? Describe the trade of Australia. Name its largest two cities. What can you say of Melbourne?

mercial centre of Australia. A line of steamships plies regularly between Liverpool and Melbourne.

SYDNEY, the capital of New South Wales, is the oldest city of Australia, and is next to Melbourne in commercial importance. It is connected by a line of steamships with San Francisco.

Adelaide, the capital of South Australia, and Hobart Town, the capital of Tasmania, are important commercial ports.

The Government of the Australian colonies is conducted on the same general plan with that of the provinces of British America (page 55).

THE ISLANDS OF THE SEA.

I. MALAYSIA.

Position and Possessors.—The great archipelago between Asia and Australia, which is the home of the Malay race, is called Malaysia.

The greater part of the archipelago belongs to Holland, and is styled the Dutch East Indies.

The Philippine Islands belong to Spain. England possesses some small islands near the Malay peninsula. The northern portions of Sumatra and Borneo are independent.

Characteristics.—These islands are all mountainous, and form one of the most remarkable volcanic regions on the globe.

There is a great abundance of valuable minerals, especially gold, copper, iron, and coal. Diamonds are found in Borneo and Celebes, and tin, in immense quantities, in the small island of Banca, east of Southern Sumatra.

The climate is tropical, with an abundance of moisture. The vegetation, of the same general character as in India, is unsurpassed in luxuriance and in the great variety of useful plants which are indigenous.

Trade.—The Malaysian islands are the centre of an immense export trade, especially with Holland, Spain, and England. Java, Sumatra, the Philippines and the Molucca Islands furnish the great bulk of the exports.

The chief exports are rice, coffee, sugar, timber, tin, gold, diamonds, tobacco, and spices.

Cities.—The great centres of trade are MANILLA, in the Philippines; SURABAYA and Batavia, in Java; Palembang, in Sumatra; Macassar, in Celebes, and Amboyna in the Moluccas. The last the greatest spice market in the archipelago.

The Malays of the archipelago are a brave, intelligent, and adventurous people. They have attained considerable skill in agriculture and some branches of manufacturing, are expert in ship-building, and are bold and skilful sailors.

II. OTHER DIVISIONS OF OCEANIA.

Melanesia includes PAPUA and the chain of smaller islands which extend south-eastward nearly to New Zealand.

Questions.—What can you say of Sydney? What smaller commercial centres are important? How is the government organized? What constitutes Malaysia, and to whom does it belong? What is the character of the surface and mineral wealth? Of the climate and vegetation? Describe the trade, and name the exports. Name the great commercial centres of Malaysia? What constitutes Melanesia?

Papua is almost unknown. The smaller islands yield a variety of valuable timber-trees and of tropical food-plants.

The inhabitants, called *Papooos*, are a black race with bushy or frizzled hair, and are almost wholly savage.

Micronesia includes the multitude of small islands lying eastward of the Philippines. By far the greater number are of coral formation, and are but little above the sea-level.

The coral islands have but few kinds of plants, and their animals are few and small. The inhabitants, who are Malays, live principally upon fish, and spend a large part of their waking hours in the water.

Polynesia includes the multitudes of islands lying in the midst of the Pacific Ocean south of the equator. They are partly volcanic, and partly of coral formation, and have generally a fine climate and beautiful vegetation.

The most important groups are the Feejee and the Society Islands. The former belong to the British Empire; the latter, to France.

Questions.—Describe the islands of Melanesia and their inhabitants. Describe Micronesia. Describe Polynesia.

New Zealand, a British colony, consists of a group of mountainous islands south-east of Australia.

These islands are rich in coal, iron, copper, and gold; and have a temperate climate with abundant moisture.

The soil is generally fertile, and forests and cultivable lands are extensive. Stock-raising and wheat-growing are the chief pursuits of the colonists. Auckland is the capital.

The Sandwich Islands are an important volcanic group, near the northern tropic.

Sugar, coffee, and other productions of tropical regions are largely cultivated, and form the chief exports of the islands.

Honolulu, the capital, is an important commercial port, and a regular stopping place for the steamships plying between San Francisco and Sydney.

The native population, who are Malays, long ago adopted the customs of civilized life; and many Americans and Europeans have established themselves in the islands, and contributed largely to their wealth and commercial importance. The government is a constitutional monarchy.

Questions.—Describe New Zealand. Where are the Sandwich Islands? Describe these islands. What is the importance of Honolulu? What can you say of its inhabitants?

REVIEW OF THE EASTERN HEMISPHERE.

REVIEW ALL THE MAP STUDIES.

(Page 68.) Name and describe the two great contrasting divisions of Europe.

(69.) Where do the largest rivers of Low Europe have their sources? Name the largest five. Where do the principal rivers of High Europe rise? Name the main stream of each slope. Describe the climate of Low Europe; of High Europe. What is remarkable about the vegetation of the southern peninsulas? By what race is Europe inhabited? What form of government have the European states?

(70.) What are the characteristics of Norway and Sweden? Name and describe the largest two cities of each. Describe the position and characteristics of Russia. Name and describe each of its largest five cities. Describe European Turkey. Name and describe its four chief cities. What constitutes the Turkish Empire?

(71.) Describe Greece, and name its exports. Name and describe its two chief cities. Describe the surface, productions, and exports of Italy. Name and describe its ten great cities. Describe Spain and name its exports. Name and describe its six chief cities? What is the character of Portugal? Describe its chief cities.

(73.) Describe Denmark, and its largest city. Describe Holland. What foreign possessions has Holland? Describe its three largest cities. Describe Belgium, and its four great cities. Where is the German Empire, and of what does it consist?

(74.) Describe its soil, mineral wealth, productions, and commerce. Describe the six great cities of Prussia; the five most important cities in other parts of the Empire. Where is the Austrian Empire, and of what does it consist? Describe its natural wealth, productions, and trade. Describe the five principal imperial cities.

(75.) Name and describe the three most important cities of Hungary. Describe Switzerland. Name and describe its three chief cities. Describe the surface, climate, productions, and commerce of France. Name and describe the eight great cities of France. Name four smaller towns of great importance.

(76, 77.) Describe the position and characteristics of the United Kingdom. Describe the twelve great cities of England; the two great cities of Scotland; of Ireland. Describe the British Empire. Name the cities of Europe which have more than 1,000,000 inhabitants; those between 500,000 and 1,000,000; between 400,000 and 500,000; between 300,000 and 400,000; between 200,000 and 300,000; between 100,000 and 200,000.

Name the leading countries of Europe in agriculture; in mining; in the fisheries. Name the countries whose exports are chiefly of raw materials, and name the articles exported by each. What countries export manufactures chiefly? What countries export wines and liquors? Name the greatest commercial centres of Europe.

(80.) Describe the structure of Eastern Asia with its central highlands and slopes. Describe Western Asia. Describe the rivers of Eastern Asia.

(81.) Describe the climate of Asia. Describe the fertile regions; the barren lands. What is remarkable in regard to the animals of Asia? By what races is Asia inhabited? What are the governments and religions of the Asiatic nations?

(82.) Describe the Russian possessions in Asia. Of what does the Chinese Empire

consist? Describe the surface, productions, and commerce of China. Describe the five Chinese cities which have above 1,000,000 inhabitants. Name and describe the other great cities of China. Describe the Chinese nation. Describe Eastern Turkestan, and name its two chief cities.

(83.) Describe Japan. Name and describe its three great cities. What cities are of especial interest to foreigners, and why? Describe the Japanese. Describe the Indian peninsulas. What is the extent of the British possessions in the Indies? Describe their trade; their six great commercial cities. Name and describe three other important cities. What is the plan of government in the British Indies?

(84.) Name the native kingdoms in the Himalayas; in Indo-China. Which is the most important in each region? What possessions have the French in India-China? What great city? Describe Independent Western Turkestan; Afghanistan and Beloochistan; Persia; Arabia. Name and describe the great cities in these countries. Describe Asiatic Turkey. Name and describe its four great cities.

(85.) Name the cities of Asia which have above 1,000,000 inhabitants; those which are between 500,000 and 1,000,000; those between 400,000 and 500,000. What and how populous are the largest cities of Western Asia. What are the most commercial countries of Asia? Name their exports. Name the great commercial ports; the centres of caravan trade.

(88.) Describe the surface of Africa. State in what part of Africa are the sources of its great streams. Name its river systems, and describe the Nile.

(89.) Describe the climate of Africa. Describe the vegetation of the moist, tropical region; of the dry lands; of the Mediterranean shores and Cape Colony. Describe the animals of Africa; the inhabitants.

(90.) Describe the position, productions, and commerce of Egypt. Describe its four chief cities. Of what empire does Egypt form a part? Describe the Barbary States, and their leading cities. Describe the Sahara; Sudan.

(91.) What nations possess the coast countries of Eastern Africa? What are the exports of these countries? What countries occupy the extreme southern portion of Africa. Describe Cape Colony and Natal. Name and describe the chief city of South Africa. Describe Senegambia; Sierra Leone; Liberia; the Portuguese possessions of the west coast. Name the cities of Africa which have more than 100,000 inhabitants. Name those between 30,000 and 100,000. What are the leading commercial countries of Africa? What are the exports of each.

(94.) Describe the surface, rivers and lakes of Australia. Describe the climate; the vegetation. What is peculiar about the animals of Australia? Name the colonies of Australia. Describe their mineral wealth. Name their exports.

(95.) Describe the chief cities of Australia? To whom do the islands of Malaysia belong? Describe their surface, mineral wealth, climate, and trade.

(96.) Name the great commercial centres of Malaysia. Describe Melanesia; Micronesia; Polynesia; New Zealand; the Sandwich Islands.

GENERAL REVIEW.

I. POLITICAL STATUS OF COUNTRIES.

EXERCISES.—THE TABLES—reproduce from memory, orally or on the black-board.

INDEPENDENT COUNTRIES—state their locations, boundaries, and forms of government; and name their capitals and other important cities.

DEPENDENT COUNTRIES—state their locations and boundaries; name the countries to which they belong; and name the capitals and the plan of government of the British dependencies.

| | | | |
|-----------------------------------|----------------------|---|---|
| I. NORTH AMERICA AND ITS ISLANDS. | REPUBLICS..... | United States. Mexico, Guatemala, Honduras, San Salvador, Nicaragua, Costa Rica. | The government in all these countries is unsettled. |
| | DEPENDENT DIVISIONS. | Alaska (to United States), Greenland and Iceland (to Denmark), Dominion of Canada, Newfoundland, Bahama Islands, Part of Lesser Antilles. Cuba, Porto Rico, Part of Lesser Antilles. Other Lesser Antilles. (To FRANCE, HOLLAND, DENMARK, and SWEDEN.) | To Great Britain. To Spain. |

| | | | |
|--------------------|----------------|---|---|
| II. SOUTH AMERICA. | REPUBLICS..... | Venezuela, Columbia, Ecuador, Peru, Argentina Republic. | Bolivia, Chili, Paraguay, Uruguay, |
| | EMPIRE..... | Brasil. | |
| | DEPENDENT..... | Guiana..... | British, French, Dutch. |
| | UNSETTLED..... | Patagonia. (No Government.) | |

| | | | | |
|--|----------------------|--------------------|--|--|
| III. CONTINENT OF EUROPE, AND BRITISH ISLES. | LIMITED MONARCHIES. | KINGDOMS..... | GREAT BRITAIN AND IRELAND, Norway and Sweden (one sovereign), Denmark, Holland, Belgium, PRUSSIA, Bavaria, Wurtemberg, | Greece, Italy, Portugal, Spain (Government unsettled), Saxony, Hungary. |
| | | EMPIRES..... | AUSTRIA (includes the Kingdom of Hungary), GERMANY. | |
| | | PRINCIPALITY..... | Roumania. (Part of Turkish Empire.) | |
| | ABSOLUTE MONARCHIES. | RUSSIA, Turkey. | Empires. Large part of each empire in Asia. | |
| | | REPUBLICS..... | FRANCE (since 1871), Switzerland, Hamburg, Bremen, Lubeck. San Marino. (A small Italian city.) Andorra. (A small country in the Pyrenees.) | German Cities. |

IV. SMALLER EUROPEAN ISLANDS.

| 1. Atlantic Ids. | 2. Baltic Ids. | 3. Mediterranean Ids. |
|--|--|--|
| Shetland Ids. <i>Belong to</i> Orkney Ids. <i>Great Britain.</i> Hebrides Ids. <i>Great Britain.</i> Isle of Man. <i>Great Britain.</i> Anglesey. <i>Great Britain.</i> Isle of Wight. <i>Great Britain.</i> Scilly Ids. <i>Great Britain.</i> Channel Ids. <i>Great Britain.</i> | Bornholm. <i>Denmark.</i> Zealand. <i>Denmark.</i> Funen. <i>Denmark.</i> Island. <i>Denmark.</i> (And small islands near them.) Oeland. <i>Sweden.</i> Gothland. <i>Sweden.</i> Eugen. <i>Prussia.</i> Aland Ids. <i>Russia.</i> Dago. <i>Russia.</i> Oesel. <i>Russia.</i> | Balearic Ids. <i>Spain.</i> Corkica. <i>France.</i> Sardinia. <i>Italy.</i> Sicily. <i>Italy.</i> Malta. <i>Great Britain.</i> Ionian Ids. (In <i>Ionian Sea, on west coast of Greece.</i>) <i>Greece.</i> Candia. <i>Turkey.</i> Rhodes. <i>Turkey.</i> Cyprus. <i>Turkey.</i> |

V. MONARCHIES OF ASIA. ALL ABSOLUTE.

| | |
|-------------------------------|--------------------------|
| Chinese Empire. | |
| Empire of Japan (Islands). | |
| " Persia. | |
| " Burmah..... | } in Indo-China. |
| Kingdom of Siam..... | |
| " Anam..... | } in Himalaya Mountains. |
| " Nepal..... | |
| " Bhotan..... | |
| " Cashmere..... | |
| " Corea (Tributary to China.) | |

Small kingdoms and khanats in Arabia, Afghanistan, Beloochistan, and Western Turkestan.

VI. DEPENDENT ASIATIC COUNTRIES.

Siberia, Russian Turkestan, Trans-Caucasia (belonging to Russia).
India, divided into the presidencies of Bengal, Madras, and Bombay (to Great Britain).
Lower Cochinchina (to France).
Asiatic Turkey, including Hedjaz (to Turkish Empire).

ISLANDS.

| | | | |
|------------------------------|-----------------|-------------------------|------------------|
| Borneo..... | half of each... | Ceylon..... | Belong to |
| Sumatra..... | | Andaman Islands..... | } Great Britain. |
| Java..... | | Singapore..... | |
| Celebes..... | | Hong-Kong..... | |
| Banca..... | | | |
| Molucca Islands..... | | Philippine Islands..... | Spain. |
| New Guinea (west half)..... | | Saghalien..... | Russia. |
| Several Smaller Islands..... | | New Siberia..... | |

(See Map, page 92.)

VII. N. AFRICA. (Inhab. by white race.)

| | |
|----------------------------|--|
| ABSOLUTE MONARCHIES. | Marocco (Empire), Tripoli (Sovereign called <i>Pasha</i> (pa-shaw'). |
| CONSTITUTIONAL MONARCHIES. | Egypt (Sovereign called <i>Viceroy</i>), Tunis (Sovereign called <i>Bey</i>). |
| DEPENDENT COUNTRIES. | Algeria..... <i>Belongs to France.</i> Barca..... <i>Turkey.</i> Nubia..... <i>Egypt.</i> Kordofan..... |

VIII. CENTRAL AND SOUTH AFRICA.

| | | | |
|---------------------|--|--|---|
| REPUBLICS..... | Liberia, Transvaal Rep. Or. R. Free State. | Sierra Leone, Cape Colony, Natal. | Belong to Great Britain. |
| NATIVE KINGDOMS IN. | Senegambia, Soudan, Abyssinia, Zanguebar. | Congo, Angola, Benguela, Mozambique. Senegambia. | Belong to Portugal. Belongs to France. |

IX. AUSTRALIA AND OCEANIA.

Australia, Tasmania, New Zealand, Feejee Islands. (To Great Britain.)
Society Islands, New Caledonia. (To France.)
Sandwich Islands. (Independent Constitutional Monarchy).

II. MISCELLANEOUS QUESTIONS.

I. The Globe.—State the form and size of the earth. Name and define the geographical circles. Define latitude and longitude. What latitude have places on the equator? What longitude have places on the prime meridian? What is the longitudes of the poles? Why?

What meridian (see map of the world, page 12) passes over the eastern part of Hudson Bay? Where does this meridian cross South America? What city in North America, and what one in South America near the meridian of 80° west longitude? What meridian passes near the middle of Africa? What part of Europe is crossed by this meridian? What meridian crosses the western part of Australia? Between what two cities does this meridian cross Asia? What islands between Asia and Australia lie on or near this meridian?

What continents and islands are crossed by the Equator? What bodies of land and water are crossed by the Tropic of Cancer? By the Tropic of Capricorn? What parallel crosses the southern peninsulas of Europe? Where does this parallel cross Asia? North America? What is the only continent crossed by the parallel of 40° south latitude? What islands lie on or near this parallel?

What important cities of the United States (see map, page 18) lie on or very near the parallel of 40° north latitude? What others lie between the parallels of 35° and 40°? Between the parallels of 40° and 45° north latitude? What great cities of

Europe lie on or near the parallel of 43° north latitude? Near the parallel of 53°? Near the parallel of 63°? In what countries of Europe are these cities? Are there any great cities on or near this parallel in North America or Asia? Why not? What great cities of North America and Asia on or near the tropic of Cancer?

II. Location of Natural Divisions of Land and Water.—

PENINSULAS AND CAPES.—State in what continent or island each is situated, also in what direction, and into what waters each projects.

Yucatan, Nova Scotia, Lower California, Cape Cod, Alaska, Cape Hatteras, Florida, Cape San Lucas, Scandinavian Peninsula, Cape Matapan, North Cape, Finisterre, Cape Horn, Cape Gallinas, Cape St. Roque, Punta Aguja, Cape Verd, Cape Bon, Cape Guardafui, Cape of Good Hope, Cape Spartel, Cape Comorin, Arabia, Kamchatka, Indo-China, Deccan, Corea, North-east Cape, Cape Romania, Asia Minor, Malay Peninsula.

COAST WATERS.—State with what ocean each is connected, to what continent it lies adjacent, and what lands, if any, surround it. If a strait, state what waters it connects.

Arabian Sea, Hudson Bay, Gulf of Venezuela, Gulf of California, Baltic Sea, Gulf of St. Lawrence, Mediterranean Sea, Gulf of Mexico, Strait of Gibraltar, Strait of Magellan, English Channel, Bay of Biscay, Adriatic Sea, Sea of Azov, Bay of Bengal, South China Sea, Baffin Bay, Red Sea, Persian Gulf, Strait of Malacca, Yellow Sea, Strait of Bab-el-Mandeb, Black Sea, Mozambique Channel, Sea of Okhotsk.

MOUNTAINS, PLATEAUS, AND PLAINS.—In describing a mountain system, plateau, or plain, state in what continent, and in what part of the continent, it is situated; in what direction, and how far it extends. In describing a single mountain range or peak, state to what system it belongs, and in what part of the system it is situated.

Himalaya Mountains, Alps, Atlas, Andes, Sierra Nevada, Blue Mountains, Rocky, Kong, Carpathian, Pyrenees, Kuenlun, Balkan, Appalachian, Thian-Shan, Cascade,

Ural, Alleghany, Adirondack, Catskill, White, Union Peak, Mount Whitney, Black Mountains.

Plateau of Bolivia, Table-land of Brazil, Thibet, Plateau of Transylvania, Table-land of Iran, Plain of Hindoostan, Plain of Siberia, Great European Plain, Kirghia Steppe, Pampas, Llanos, Selvas, Great Central Plain of North America, Table-land of Mexico, Nevado de Sorata.

RIVERS.—Mississippi, Missouri, Arkansas, Ohio, Rio Grande del Norte, Colorado, Columbia, Yukon, Hudson, Potomac, Savannah, Amazon, Madeira, Orinoco, La Plata, Volga, Danube, Don, Duna, Rhine, Rhône, Po, Seine, Elbe, Oder, Thames, Obi, Lena, Yenisei, Hoang-Ho, Yang-tse-Kiang, Mekong, Ganges, Irrawaddy, Indus, Amoo Daria, Sir Daria, Nile, Niger, Congo, Zambezi, Murray.

LAKES.—State in what country, and what part of the country, each is situated, what large rivers, if any, it receives, and by what stream its waters are discharged.

Lake Superior, Athabasca, Maracaibo, Huron, Great Salt, Great Bear, Michigan, Great Slave, Titicaca, Erie, Ontario, Albert Nyanza, Victoria Nyanza, Tohad, Constance, Geneva, Onega, Ladoga, Tanganyika, Nyassa, Caspian Sea, Aral Sea, Balkh, Balkhash, Eyre, Torrens, Dead Sea.

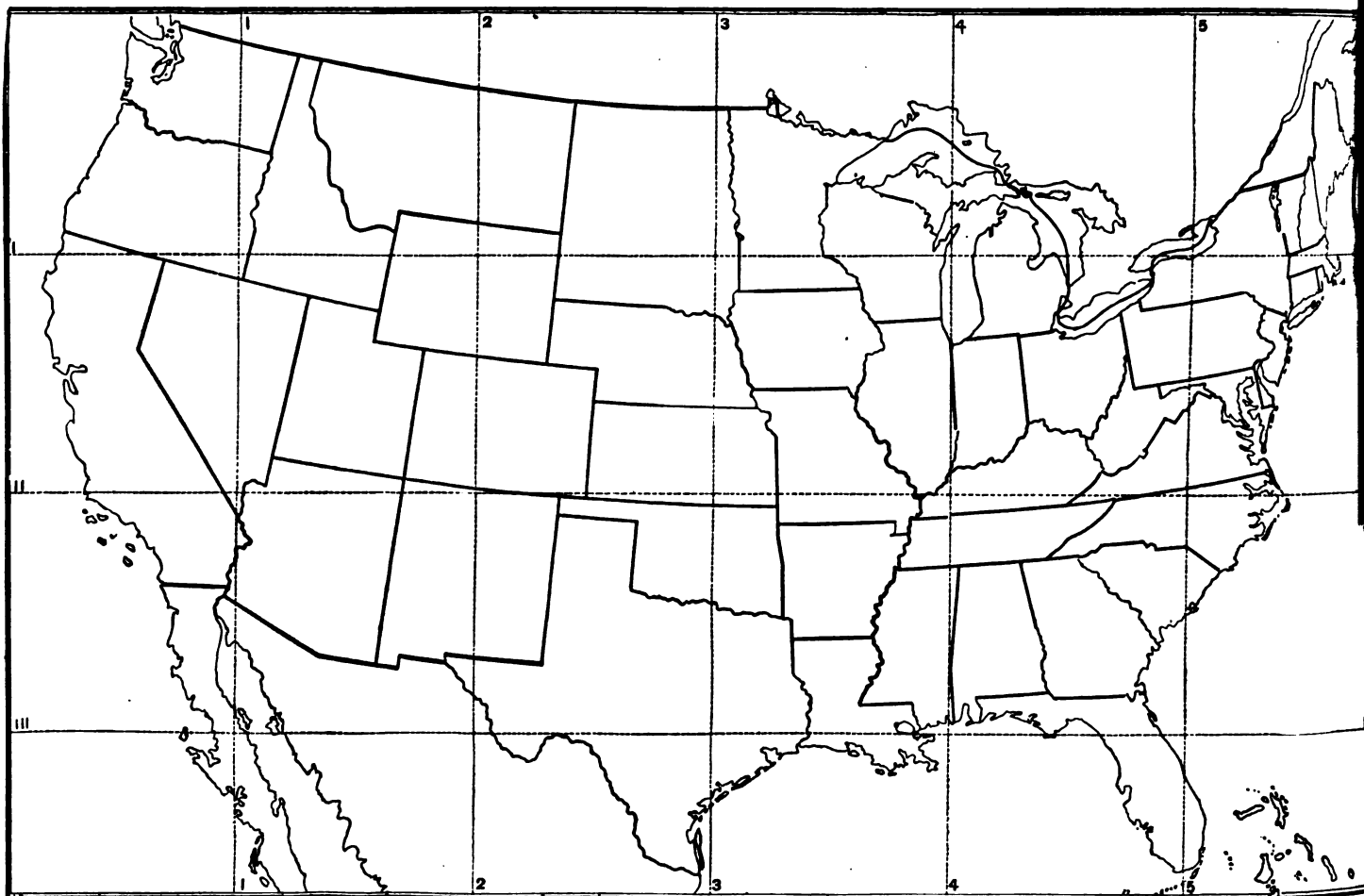
III. Great Cities.—Name, describe the location, and state the important facts concerning the cities of the earth which have more than 100,000 inhabitants. See pages 57, 65, 77, 85, 91, 95, 96.

IV. Commerce of the World.—Name (see pages named above) the leading commercial countries of each continent, their exports, and their great commercial centres.

V. Review the Local Geography of the United States, by giving the boundaries of each State, its principal mountain ranges, rivers, and lakes (if it has any); and locating its capital and two or more of the other important cities, according to the discretion of the teacher.

DIAGRAM FOR DRAWING THE UNITED STATES ENTIRE.

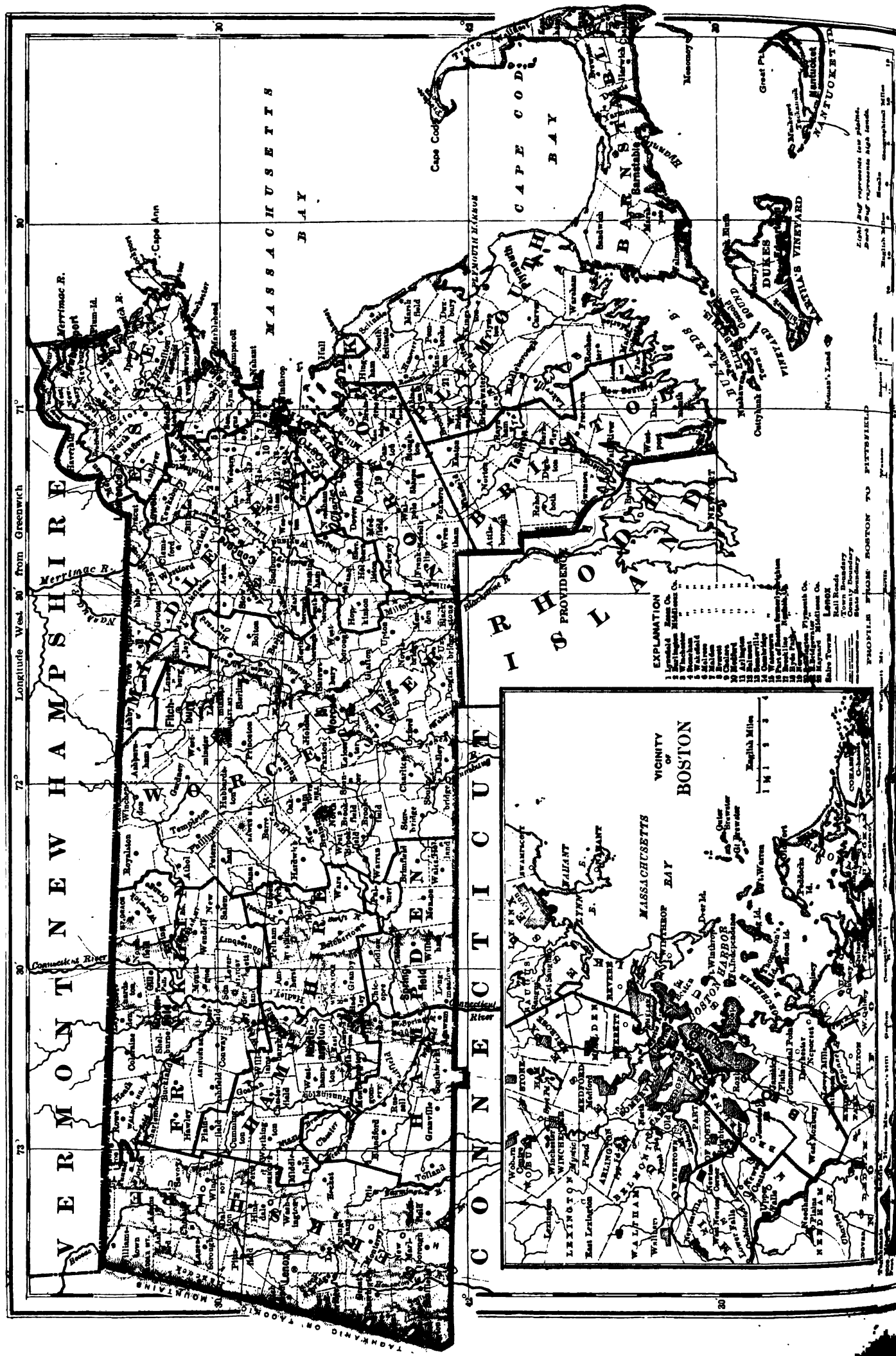
NOTE.—The space between the construction lines is 500 miles.



GEOGRAPHY OF MASSACHUSETTS.



BY A. GUYOT.

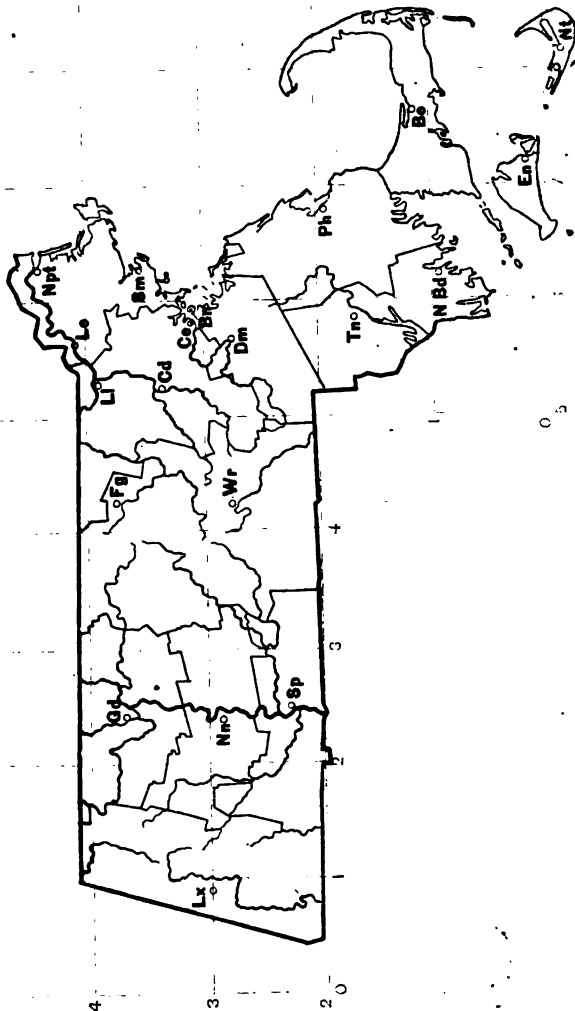


MAP STUDIES.

NOTE TO THE TEACHER.—The descriptive text upon the counties commences on page 110. Let the county in which the school is situated be studied immediately after the lesson on the town, outlined below for the convenience of the teacher. Take up the other counties in order, after the general description of this State as a whole. The list of questions is designed to be used for every county and indicates the topics upon which information is to be given. It is impossible in an article of limited length, to describe the surface, resources and business of the several towns of the State; neither is such a description necessary. The teacher, if a resident of the town in which he is teaching, will be able to give a personal observation, a much better knowledge of it than any book could give; and if a stranger, he can ascertain, by conversation with his patrons, all that he needs to know, to give the pupils a good idea of such parts of the town as lie beyond the range of their own observations. The best method of carrying on these lessons will be to give the pupils, each day, a few of the questions indicated below, requesting them to ascertain by observation or by inquiry as much as possible upon each point. On the morrow call upon them to state all they have thus been able to learn; and afterward give as much additional information as may be thought necessary or desirable. Finish the lesson by drawing a map of the town and locating its mountains, streams, and villages. A similar exercise should be given upon the resources of the pupils' own county, making use of the descriptive text and the map questions, in addition to what they may ascertain for themselves; and finishing, if practicable, by drawing the map. Any teacher can readily devise a series of horizontal and vertical lines which will enable him accurately to sketch an outline of the county in which he is teaching.

STUDY OF THE PUPIL'S TOWN.

QUESTIONS.—In what town is the school situated? In what part of the county is this town situated? How is it bounded? What is its length, and what its breadth? How many square miles does it contain? Is the surface level, hilly, or mountainous? What mountains (if any) in this town? What streams (if any) cross it? What lakes or ponds lie within, or partly within it? In what parts of the town are they? What streams bring water into them? What streams carry the water out from them? Does this town possess any valuable mines or quarries? In what parts of the town are they situated? What is obtained from the mines? What is obtained from the quarries? Which do the farmers of the town chiefly raise, grain or stock? Why is this? What are the principal crops raised in the town? Where is the farm produce carried to market? By what means is it transported? What important manufacturing are situated in this town? In what parts of the town are they located? What streams furnish the power? What materials are used in these factories? Where are these materials obtained? What articles are made from these materials? Where are these articles sent for market? How are they sent? What villages are situated in this town? In what parts of the town are they? What are the principal kinds of business in each? What railroads or stage roads cross this town? To what places do they lead? What officers have charge of the public business and interests of the town?



STUDY OF THE COUNTY.

What is the name of this county? In what part of the State is it situated? How is this county bounded? What is its greatest extent from east to west? (Measure with the scale at the margin of the map.) What is its extent from north to south? What mountains (if any) border or traverse this county? What prominent peaks (if any) are included within its territory? In what part of the county are they situated? What river or rivers traverse this county? What lake or lakes (if any) are included in it? Into what streams do these lakes discharge? Into how many towns is this county divided? Name the border towns, commencing with the most north-westerly. Name the interior towns. What important villages are situated in this county? In what town, and on what stream, if any, is each situated? What is the shire-town of the county? What is a shire-town? A shire-town is the seat of government for the county. In what part of the county is the shire-town situated? What railroads cross this county? What towns are traversed by each? What villages are situated upon each?

QUESTIONS ON MAP OF THE STATE.

Position. What parallel near the southern boundary of Massachusetts? What portions of the State are crossed by this parallel? What parallel crosses the southernmost points of the mainland of Massachusetts? What portions of the State lie south of the parallel of 41° 30'? What parts of the State are crossed by the meridian of 70° 30'? What part of the State lies east of this meridian?

Coast.

What forms the easternmost point of Northern Massachusetts? What long narrow island on the coast north-west of Cape Ann? What two small peninsulas on the coast south-west of Cape Ann? What two large bays on the eastern coast of Massachusetts? What land incloses Cape Cod Bay? What large bay on the southern coast of the State?

What group of islands inclose Buzzard's Bay on the south? Name the four principal islands of the group. Where is Penikese? What two large islands lie south of Cape Cod Peninsula? What water separates Martha's Vineyard from the Elizabeth Islands? What small island lies south-west of Martha's Vineyard?

Surface.

What is the only mountainous portion of Massachusetts? What mountain ranges in this portion? What prominent peak in the extreme north-western part of the State? What peak in the southwestern part? What prominent elevations near the Connecticut River? On which side of the river are they? Where is Wachusett Mountain? Hawes' Hill? Mount Lincoln?

Inland Waters.

What important stream flows through the north-eastern part of Massachusetts? What is its general direction within this State? In what State does it rise? What tributaries does it receive within the State? What important river enters the northern part of Boston Harbor? What river of Massachusetts enters Narragansett Bay? What important stream crosses the western portion of Massachusetts? Where does this river rise and where reach the sea? What streams does the Connecticut receive from Central Massachusetts? Where do these streams rise? What streams enter the Connecticut from Western Massachusetts? What two streams drain the valley west of the Hoosac Mountains? In what direction does each flow?

Cities and Populous Towns.

Describe the location of each, stating in what part of the State it is situated, on or near what water, and in what direction from Boston?

Where is Boston? Worcester? Lowell? Cambridge? Lawrence? Lynn? Fall River? Springfield? Somerville? Salem? Newton? Newburyport? Fitchburg?

Suffolk County (See small map.)

What (see text) does this county consist of? In what part of it is Chelsea? Where are Revere and Winthrop? What districts are included in the western and southern suburbs of Boston? What rivers form the northern and southern boundaries of the main land districts of Boston? In what part of this large area does the heart of the city lie? Answer.—On the small peninsula between Charles River and the Harbor. Where is the district called South Boston? East Boston? Charlestown? Roxbury? Brookline? What bay at the south and east of Boston? What forts guard Boston Harbor? Name the largest three of the islands inclosing the harbor. What large cities on the west shore of Charles River? What river on the north side of Charlestown?

Drawing the Map.

1. Draw a very light horizontal line, and divide it into nine equal parts, using one part (equal to about 23 miles) as a measure (M.).
2. At each end, and at each point of division, draw vertical lines downward.
3. Lay off, on the right-hand vertical line, 5 M., and draw horizontal lines at the end points marked.

NOTE.—The first horizontal line drawn—numbered 5 in the scheme—is the parallel of 43° north latitude; and the vertical line numbered 6 is the meridian of 71° west longitude from Greenwich, England.

4. Place, by observing their position on the horizontal and vertical lines in the plan, the extreme north-western, north-eastern, south-western and south-eastern points of the State, and Cape Cod Peninsula.
5. Trace all the straight line boundaries of the State, beginning with the northern.
6. Trace the coast line and the outlines of the Elizabeth Islands, Martha's Vineyard, and Nantucket.
7. Trace the boundaries of the counties, commencing with the most western county in the northern tier.

GEOGRAPHY OF MASSACHUSETTS.

DESCRIPTION OF THE STATE.

Position.

Massachusetts is situated in the southern half of New England, having Vermont and New Hampshire on the north, the Atlantic on the east and south-east, Rhode Island and Connecticut on the south, and New York on the west.

It lies mainly between the parallels of 42° and 43° north latitude, and the meridians of $70^{\circ} 30'$ and $73^{\circ} 30'$ west longitude. The extreme limits, however, lie more than one-half a degree farther to the east and the south.

Form and Extent.

The main body of the State forms a parallelogram, about 140 miles long and nearly fifty miles wide.

Beyond the limits of this figure there is a small projection toward the north-east, including the lower course of the Merrimac River, and a larger district extending toward the south-east. The latter terminates with the long, narrow peninsula of Cape Cod, and the islands of Nantucket and Martha's Vineyard.

The entire area of the State is 7,800 square miles, or about 5,000,000 acres.

Surface.

The surface of Massachusetts presents no extreme features, but varies from low, sandy plains in the south-east, to rugged mountains near the western border.

The State consists of four different natural divisions, namely: the Atlantic Plain, the Middle Highlands, the Connecticut Valley, and the Western Highlands.

The ATLANTIC PLAIN extends from the seaboard westward about forty miles. Its western limit may be indicated by an irregular north and south line, crossing the State a little east of Wachusett Mountain.

Though the most level part of the State, this region is generally uneven, the elevation increasing gradually westward. The peninsula of Cape Cod, and the adjacent parts of the mainland, are flat and sandy.

Cape Ann peninsula, and the smaller peninsulas of Marblehead and Nahant, are rugged granite formations.

The MIDDLE HIGHLANDS occupy a belt of about forty miles, between the Atlantic Plain and the Connecticut Valley.

This region has a greater general elevation than the preceding, and the eastern part forms the water-shed between the Atlantic and the Connecticut.

Though the surface is generally hilly, there are but few prominent elevations. Mount Wachusett, near the eastern border, is the highest, being 2,000 feet above the sea level. The more prominent of the lesser elevations are Tuft's Hill and Hawes Hill, in the central part, and Mount Lincoln, near the western border.

The CONNECTICUT VALLEY crosses the State between the Middle and Western Highlands. It varies in breadth from five to twenty-five miles.

This region is an alluvial plain, lying on both sides of the river, interrupted by occasional ridges of trap-rock. The most noted of these are Mount Holyoke, on the eastern side of the stream, 900 feet high; and Mount Tom, on the western, 1,200 feet in height.

Viewed from Mount Holyoke, this valley presents the most picturesque landscape in the State.

The WESTERN HIGHLANDS include that part of the State west of the Connecticut Valley, and, like the eastern, is about forty miles in breadth.

The eastern portion resembles the Middle Highlands, but presents greater irregularities of surface, more abrupt hills, and deeper valleys.

The western portion is mountainous, being crossed from north to south by two parallel ranges of the Green Mountain System; the Hoosac on the east, the Taconic on the west.

The Hoosac range, lying from twenty to thirty miles from the river, is only about half the height of the Taconic. The latter contains the highest peaks in the State, namely: Saddle Mountain, 3,500 feet high, and Bald Mountain, 2,600 feet.

The valley between these ranges, drained by the Housatonic and Hoosac Rivers, is partly alluvial, and in many respects similar in character to the Connecticut Valley.

ISLANDS are numerous along the coast, and resemble the adjacent mainland in character. The only ones of considerable

size are Nantucket and Martha's Vineyard. The former is fifteen miles long and eleven broad in the widest part; the latter twenty-one miles long and from two to ten miles wide.

Plum Island, off the east coast, north of Cape Ann, is nine miles long and one mile wide. The most noted of the smaller islands are the group in Massachusetts Bay, near Boston, and the Elizabeth Islands, inclosing Buzzard's Bay on the south-east.

Inland Waters.

Every part of the State is bountifully watered, but in general the streams are more available for agricultural and manufacturing purposes than as channels of communication. The largest rivers are the Connecticut and the Merrimac.

The Connecticut flows southward, through the Connecticut Valley. In this State it is scarcely used for navigation, but affords immense water-power at South Hadley Falls and at Turner's Falls. Its principal tributaries from the Middle Highlands are Miller's River, and the Chicopee, formed by the confluence of the Ware and the Swift. From the Western Highlands it receives the Deerfield and the Westfield.

The Merrimac enters the State from New Hampshire, and flows through the north-east part into the Atlantic. It is navigable for small craft to Haverhill, twenty miles from its mouth; but is chiefly valuable as a source of water-power, and is more fully utilized for manufacturing purposes than any other river of equal extent. Its most important tributaries are the Nashua and the Concord.

The remaining streams are small. In the Atlantic Plain the principal are the Charles and the Neponset, entering Massachusetts Bay, and the Taunton and Blackstone, flowing into Narragansett Bay.

The Quinnebaug, from the Middle Highlands, flows southward into the Thames. The Housatonic, flowing southward to the Naugatuck, and the Hoosac, flowing northward and westward to the Hudson, drain the mountainous portion of the Western Highlands.

Minerals.

The mineral wealth of Massachusetts consists chiefly of building-stone, especially granite. This is most abundant in the eastern part of the State, at Quincy, Rockport, Westford, and Fitchburg.

White marble and soapstone occur in the Western Highlands, and sandstone abounds in the Connecticut Valley.

Among the metals, silver and lead are found near Newburyport, and small quantities of copper and iron in different parts of the State.

Climate.

The climate is temperate and highly salubrious. The summer, with an average temperature of 70°, is delightful, and of sufficient length for the maturing of the different grains and fruits of temperate latitudes.

The cold season is prolonged in the interior by the elevation,

and on the coast by the prevalence, during spring and autumn, of chilling easterly winds from the Atlantic. Sudden changes of temperature are common during all seasons.

The rain-fall is abundant, moisture being brought by both easterly and southerly winds. Westerly and north-westerly winds bring fair weather.

Soil and Forests.

In a large part of the State the soil does not naturally possess great fertility, but by skillful cultivation bountiful harvests are obtained.

The low, alluvial lands of the Connecticut Valley are exceedingly fertile, while the sandy tracts which occupy some portions of its area are only moderately productive.

The Housatonic Valley is like the Connecticut, but the Hoosac is almost wholly composed of rich alluvium.

The vast sandy plains in the south-eastern portion of the State and on the islands are quite barren.

The original forests, except in the mountainous and inaccessible regions, have long since been cut off; but in districts too rugged for profitable cultivation large tracts of growing timber have reappeared.

Population and Wealth.

Massachusetts has a population of 1,650,000. It is more densely populated than any other State in the Union, having an average of more than two hundred persons to each square mile of its territory.

The inhabitants are mostly native born and of English descent, but the cities and manufacturing villages contain a considerable number of foreigners, chiefly Irish, English, Scotch, and German.

Massachusetts is not only one of the oldest and most enterprising States, but also one of the wealthiest, its total valuation being seventeen hundred millions of dollars.

Occupations and Productions.

In proportion to area and population, Massachusetts is the first State of the Union in MANUFACTURING AND COMMERCE. In the actual amount of manufacturing, this State is surpassed only by New York and Pennsylvania, and in commerce by New York alone.

SHIP-BUILDING is an important industry, Massachusetts being second only to Maine in this pursuit.

The FISHERIES—cod, mackerel, herring, and whale—furnish occupation to great numbers of people in the seaboard districts.

AGRICULTURE is conducted with great skill, and, considering the nature of the soil in general, yields large returns; still, the agricultural produce of the State does not nearly suffice for the wants of its dense population. Hence a large trade in grain and other farm produce is carried on with the Central States.

The leading crops are the different grains, potatoes, and tobacco. Considerable attention is given to dairying, and the rearing of improved breeds of cattle, horses, and sheep.

The **MANUFACTURES** most largely produced are cotton and woollen goods, boots and shoes and other goods from leather; and a great variety of articles from wood and iron, among which are furniture, agricultural implements, machinery, carriages, cars, and locomotives.

The **NATURAL FACILITIES** for coastwise and foreign commerce are great, as the coast abounds in safe and spacious harbors. The harbor at Boston is one of the best in the world.

The absence of navigable inland waters, and the rugged character of the surface, form natural obstacles to trade with the interior; but enterprise and capital have effectually overcome these, and lines of traffic have been established, not only with the adjacent States and the British Provinces, but with the most remote parts of the Union.

There are not less than twenty-five hundred miles of railroad within the State, all the main lines centering in Boston. Steam-ship lines also connect Boston with Europe and with the principal domestic ports.

The **EXPORTS** of the State are the products of the manufactories, quarries, and fisheries.

The **IMPORTS** are principally food supplies and raw materials for manufacturing, European manufactures, wines and liquors, sugar, tea, coffee, spices, and foreign fruits.

Educational Institutions.

Popular education has always received marked attention in Massachusetts. The system of free schools was established in 1647, and, fostered by a wise and liberal policy, it has steadily developed, until it has attained its present high degree of perfection. The result is seen in the high reputation for general intelligence which the people of this State have always sustained.

Liberal provision has also been made for higher education. The first American college was established in Massachusetts in 1638, the first normal school in 1839, and the first normal art school in 1873.

There are within the State, besides a large number of superior high schools and academies, ten colleges and universities. These are, Harvard and Boston Universities; Amherst; Williams; Tufts; Boston; College of the Holy Cross; Agricultural; Smith College, for women; and Wellesley Female College.

Among the provisions for special education may be named the Massachusetts Institute of Technology in Boston, the Free School of Industrial Science at Worcester, seven theological

seminaries, two law schools, six medical schools, five State normal schools, and one normal art school.

The American Academy of Arts and Sciences, the Peabody Academy of Science, the Agassiz Museum of Comparative Zoölogy, and a Museum of Fine Arts, are located in this State. There are also some two hundred public libraries, containing about 700,000 volumes, and a numerous newspaper and periodical press.

Benevolent Institutions.

The State abounds in benevolent and charitable institutions, among which may be named the Massachusetts Hospital and the Boston City Hospital; four lunatic asylums, an asylum and school for the blind, one for the idiotic and feeble-minded, and one for the deaf and dumb; a reform school for boys and an industrial school for girls.

History.

The territory of Massachusetts was first settled at Plymouth by the Plymouth Colony, which landed Dec. 22, 1620.

In 1628 a settlement was made at Salem, under the leadership of John Endicott. During the next two years numerous accessions were received, other settlements were made at Boston and adjacent places, and the government of the Massachusetts Colony was organized.

These colonies remained separate, each electing its own governor, more than half a century.

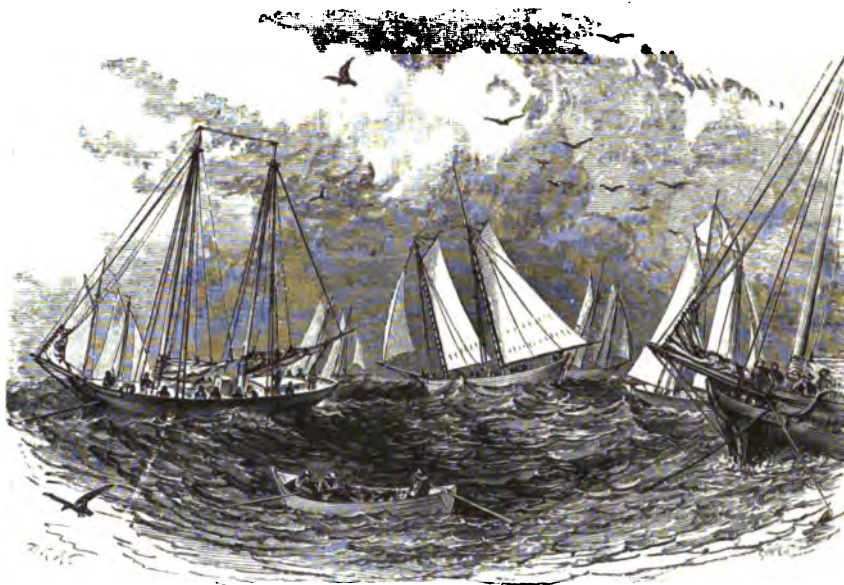
In 1686—their charters having been revoked—Sir Edmund Andros was appointed governor of the two colonies.

His arbitrary and tyrannical measures soon aroused determined opposition. His government was overthrown, and the former colonial officers reinstated.

In 1692 a new charter was granted, uniting the two colonies under the name of Massachusetts, and providing for the appointment of the governor by the crown.

During its early history the tranquillity of the province was disturbed by frequent Indian hostilities, and also by a conflict of the prevailing political and religious opinions, in which individuals were occasionally exposed to persecution from the civil power.

Massachusetts was foremost in active opposition to British tyranny and unjust taxation. Here, too, the first blood of the revolution was shed at Lexington and Concord, and the first



COD-FISHING.

great battle fought at Bunker Hill. Among the great names memorable in the revolutionary struggle, those of the Massachusetts leaders are conspicuous.

Political Organization.

The government of the State is republican, consisting of three departments: Executive, Legislative, and Judicial.

The officers of the Executive Department are, a governor, a lieutenant-governor, and an executive council of eight members; a secretary, a treasurer, an auditor, and an attorney-general.

The Legislative authority is vested in the General Court, consisting of a Senate of forty members, and a House of Representatives of 240.

The Judicial Department comprises a Supreme Judicial Court, a Superior Court, and various lower courts.

The executive and legislative officers of the State, and the various county and town officers, are elected annually by vote of the people. The judiciary are appointed by the governor and council for life, or during good behavior.

Women are not voters, but may legally be elected upon school committees, and appointed on boards of trustees for certain public institutions.

Description of Counties and Cities.

COUNTIES AND THEIR POPULATION.

| | | | |
|----------------|---------|-----------------|---------|
| Berkshire..... | 68,270 | Suffolk..... | 364,886 |
| Franklin..... | 33,696 | Norfolk..... | 88,321 |
| Hampshire..... | 44,821 | Bristol..... | 131,087 |
| Hampden..... | 94,304 | Plymouth..... | 69,362 |
| Worcester..... | 210,295 | Barnstable..... | 32,144 |
| Middlesex..... | 284,112 | Dukes..... | 4,071 |
| Essex..... | 223,342 | Nantucket..... | 3,201 |

CITIES.

| | | | |
|------------------|---------|------------------------|--------|
| Boston..... | 350,000 | Somerville..... | 22,000 |
| Lowell..... | 50,000 | Chelsea..... | 21,000 |
| Worcester..... | 50,000 | Taunton..... | 20,000 |
| Cambridge..... | 48,000 | Gloucester..... | 17,000 |
| Fall River..... | 45,000 | Holyoke..... | 16,000 |
| Lawrence..... | 35,000 | Newton..... | 16,000 |
| Lynn..... | 33,000 | Haverhill..... | 15,000 |
| Springfield..... | 31,000 | Newburyport..... | 13,000 |
| New Bedford..... | 26,000 | Fitchburg..... | 12,000 |
| Salem..... | 26,000 | Pittsfield (town)..... | 12,000 |

Suffolk.

This county, the most populous and wealthy in the State, is also the smallest, comprising only the cities of Boston and Chelsea, and the towns of Revere and Winthrop.

Boston is not only the first city of New England, but is the second of the Union in commercial importance, in which it is surpassed by New York alone. It is a great railroad centre, being the terminus of all the principal lines in New England; and has a magnificent harbor, the advantages of which are

shared by a large population beyond the city limits. A circle drawn with a radius of fifteen miles from the harbor, including the cities and towns whose business centres here, would encompass a population of not less than half a million.

Shipping and foreign trade are the characteristic branches of business, but the domestic trade is large and varied, and the manufactures considerable. A United States navy yard is located here.

A large part of the business portion of Boston was destroyed by fire on the 9th of November, 1872, but it has since been rebuilt in a greatly improved style. The public buildings, and many of the warehouses and private dwellings, are substantial and elegant.

The Common and Public Garden, though not extensive, are beautiful pleasure grounds, and, situated in the very heart of the city, form one of its most attractive features. It has, also, numerous historical landmarks, among which are Faneuil Hall, the Old State House, the Old South Church, Bunker Hill, and Dorchester Heights.

Boston has always been noted for its superior educational facilities and numerous benevolent institutions, and for the high culture, patriotism, and enterprising character of its people.

CHELSEA is closely identified with Boston in business interests.

Essex.

This county occupies the extreme north-eastern portion of the State. It is distinguished by the rugged character of its coast, which is indented by numerous small bays, forming excellent harbors. The larger part of the lower course of the Merrimac, with superior water-power, lies within this county.

The chief mineral resources are the granite quarries of Rockport, and the silver and lead mines of Newbury.

The sea-board towns, excepting Lynn, are engaged chiefly in commerce and the fisheries; the interior towns, in agriculture and the manufacture of cotton goods and boots and shoes.

LAWRENCE is the largest city in the county, and the principal centre of cotton manufacture. It has grown up entirely within thirty years.

LYNN and HAVERHILL are the great centres of the boot and shoe manufacture.

SALEM formerly had a large trade with the East Indies, from which it derived great wealth. At present it has little importance as a commercial port.

GLOUCESTER is more extensively engaged in the cod and mackerel fisheries than any other port in the Union. These fisheries, with the trade derived from them, employ most of the labor and capital of the city.

NEWBURYPORT is an old ship-building port, which formerly had a considerable commerce, and is now the centre of a large local trade.

Andover is the seat of Andover Theological Seminary, and of Phillips Academy. Peabody, Danvers, and Marblehead are important towns.

Middlesex and Norfolk.

These counties occupy the best portion of the Atlantic plain, stretching across the State from New Hampshire to Rhode Island, and share with Suffolk the advantages of Boston harbor.

Agriculture and manufacturing are the characteristic pursuits. In Norfolk much attention is given to raising vegetables for the city markets. The granite quarries in Quincy also employ a large number of men.

The principal manufactures are cotton and woolen goods, carpets, paper, leather, shoes, railroad cars and other vehicles.

In both counties the towns adjacent to Boston are especially populous, being properly but suburbs of that city.

LOWELL, the most populous city of Middlesex, is the most celebrated manufacturing city in America and one of the largest.

CAMBRIDGE is the seat of Harvard University and is famous for its cultivated society and fine residences. This city and SOMERVILLE are closely identified with Boston in business interests.

NEWTON is the seat of a Theological Seminary. Waltham is noted for its manufacture of watches. Lexington and Concord were the scene of the first hostilities of the revolution. The latter has been the home of a number of men eminent in literature, among whom are Emerson, Hawthorne, and Thoreau.

Quincy, in Norfolk, is famous for its granite. This place is the home of the Adams family, which has produced two Presidents of the United States. Dedham is the county-seat.

Bristol and Plymouth.

These counties lie principally in the south-eastern projection of the State. Plymouth lies in the more barren portion of the Atlantic plain, but Bristol has, in the main, a productive soil.

Excellent harbors are found in both counties, and the coasting trade and fisheries occupy a large part of the sea-board population. Manufacturing—especially of cotton goods, boots and shoes, iron wares and machinery—is largely carried on in the inland towns.

FALL RIVER is one of the principal seats of cotton manufacturing in New England. NEW BEDFORD is the greatest whaling port in the country, though this business is much less extensive than formerly. TAUNTON is celebrated for its extensive locomotive works. Attleboro manufactures large quantities of jewelry. Bridgewater is the seat of a State Normal School. Abington and Middleboro are largely engaged in the shoe manufacture. Marshfield was the home of Daniel Webster. At Plymouth the first permanent settlement in New England was made by the "Pilgrims." Brockton is a large and enterprising boot and shoe town.

Barnstable, Dukes, and Nantucket.

These three counties occupy the peninsula of Cape Cod and the islands at the south and south-west of it. They are distinguished by the sterility of their soil and the extent to which their people are occupied with seafaring pursuits. They contain few places of importance.

Sandwich has the largest and most successful glass works of the country. Provincetown, on Cape Cod, is an important fishing port.

Nantucket was once celebrated for its whale fisheries, but the harbor is now almost destitute of shipping.

Martha's Vineyard is chiefly known as a summer resort.



WASHINGTON ELM, CAMBRIDGE.

Worcester.

This is the largest county of Massachusetts, and ranks fourth in population and wealth. It occupies the larger part of the Middle Highlands, and the western margin of the Atlantic plain, including some of the richest and most highly cultivated agricultural regions of the State. The principal source of wealth is in the manufactures, which are extensive and exceedingly varied.

WORCESTER, often called the "heart of the commonwealth," is an enterprising and beautiful city. It is a prominent railroad centre, has a large country trade, and carries on a great variety of manufactures, among which are iron and steel wire, agricultural implements and iron castings; machinery for cotton, paper and woolen mills; clothing and fire-arms.

The College of the Holy Cross is located here, also a Polytechnic School, a State Normal School, and the Worcester Academy.

FITCHBURG is handsomely located and growing rapidly. It is largely engaged in manufacturing, especially chairs, cotton goods, and paper.

Clinton manufactures large quantities of cotton and woolen goods and carpets. Athol, Blackstone, and several other towns also manufacture cottons and woolens. Gardner makes chairs and settees; Winchenden, hollow wooden wares; and Milford and North Brookfield, boots and shoes. At Westboro is the State Reform School for boys.

Franklin, Hampshire, and Hampden.

These counties stretch across the Connecticut Valley, and include about one-third of the Middle Highlands and nearly one-half of the Western.

They embrace an area a little larger than Worcester county; but their aggregate wealth and population is one-third less. Agriculture is the leading pursuit of the people, and tobacco is an important crop in the Connecticut Valley. Mills and manufactories are frequent on the smaller streams; and since the magnificent water-power of the Connecticut, at Turner's and South Hadley Falls, has been made available, the best facilities in the country for manufacturing purposes are here furnished.

SPRINGFIELD, the largest city in the State west of Worcester, is an important railroad centre. It has a considerable country trade, and is the seat of extensive manufactories and of a United States Arsenal.

HOLYOKE, at South Hadley Falls, has been built up within the past twenty-five years. It has almost unlimited water-power, which is employed in manufacturing, especially cottons, woolens, and paper. Chicopee, besides cotton and woolen-mills, has a noted brass foundry. At Westfield is a State Normal School. Wesleyan Academy is located at Wilbraham.

East Hampton is the seat of Williston Seminary, and South Hadley of Mount Holyoke Female Seminary. Northampton is celebrated as one of the most beautiful towns in the country.

It contains an asylum for the insane, and is the seat of Smith College for women. Amherst College and the State Agricultural College are located at Amherst.

Deerfield and Greenfield are rich farming towns, with some manufactures. Turner's Falls, on the Connecticut, in the township of *Montague*, though of recent growth, is the most important manufacturing town in Franklin county. The various works already located here, and the excellent facilities for transportation, give promise that it will become one of the great manufacturing centres of the State.

Berkshire.

This county comprises the extreme western portion of the State, including the Hoosac and Taconic mountain regions and the valleys between them. Quarries of white marble and soapstone are among the mineral resources of the county.

The elevated regions are, in winter, bleak and snowy, but in summer the air is cool and salubrious. Hence they form attractive summer resorts. The chief pursuit of the people in these districts is farming, especially dairying and stock-raising.

The valley towns have a milder climate and are adapted to the various branches of agriculture. Many of them are largely engaged in manufacturing and are quite populous.

PITTSFIELD, the most populous town in the county, carries on a variety of manufactures. It is located in a picturesque region of the Housatonic valley.

North Adams is an enterprising village with extensive manufactories of cotton and woolen fabrics. Near this place is the western entrance to the Hoosac tunnel, which pierces the Hoosac mountain, a distance of nearly four miles.

Williamstown, the seat of Williams College, is the centre of a thriving farming region. Lee has valuable quarries of white marble.

This section is noted for its picturesque beauty and healthfulness, and attracts considerable numbers of summer residents.



MEMORIAL HALL, HARVARD UNIVERSITY.

AREAS AND POPULATIONS OF THE PRINCIPAL COUNTRIES OF THE WORLD.

Areas and Population of the United States are given in connection with the descriptive text, in the body of the book, and hence do not appear in this table.

| Name of Countries. | Date of Census. | Areas in English square miles. | Population. | Inhabitants on square mile. | Name of Countries. | Date of Census. | Areas in English square miles. | Population. | Inhabitants on square mile. |
|---------------------------------------|-----------------|--------------------------------|-------------|-----------------------------|-----------------------------------|-----------------|--------------------------------|-------------|-----------------------------|
| NORTH AMERICA. | | | | | EUROPE. | | | | |
| NORTH AMERICA (Continent & Islands) | 1871 | 8,929,650 | 51,864,000 | 5.8 | EUROPE (Continent and Islands) | — | 3,848,954 | 301,600,000 | 78.4 |
| Greenland | — | 759,817 | 10,000 | 0.01 | Northern States. | | | | |
| British North America | — | 3,534,147 | 3,888,600 | 1.1 | Russian Empire (Europe and Asia) | 1867 | 8,008,778 | 81,925,400 | 10.2 |
| Bermuda | — | 24 | 11,900 | 491.7 | Russia in Europe (with Poland) | 1867 | 2,059,227 | 71,195,400 | 34.5 |
| St. Pierre and Miquelon (French) | — | 81 | 4,000 | 49.0 | Sweden | 1870 | 170,592 | 4,168,500 | 24.4 |
| United States with Alaska | 1870 | 3,603,884 | 38,926,600 | 10.70 | Norway | 1870 | 122,240 | 1,753,000 | 14.3 |
| Mexico | 1869 | 761,675 | 9,178,000 | 12.0 | Denmark | 1870 | 14,753 | 1,784,741 | 120.9 |
| Central America. | | | | | Faroe and Iceland | 1870 | 40,267 | 79,755 | 1.7 |
| Central America | 1871 | 188,373 | 2,671,000 | 14.2 | Central States. | | | | |
| British Honduras | 1871 | 13,500 | 25,800 | 1.9 | British Empire | 1871 | 8,050,000 | 171,608,600 | 21.3 |
| Guatemala | 1871 | 40,779 | 1,180,000 | 28.9 | Great Britain and Ireland | 1871 | 121,315 | 31,817,100 | 262.3 |
| San Salvador | 1871 | 7,325 | 600,000 | 81.8 | Asiatic Colonies | 1871 | 936,735 | 162,497,800 | 173.4 |
| Honduras | 1871 | 47,098 | 350,000 | 7.4 | Australian Colonies | 1871 | 3,077,701 | 1,958,600 | 0.64 |
| Nicaragua | 1871 | 53,171 | 350,000 | 6.0 | African Colonies | 1871 | 256,982 | 1,859,080 | 7.2 |
| Costa Rica | 1870 | 21,495 | 165,000 | 7.7 | North and South American Colonies | 1871 | 3,654,978 | 5,078,300 | 1.4 |
| West Indies. | | | | | France | 1869 | 204,091 | 36,469,800 | 178.7 |
| West India Islands | 1871 | 91,658 | 4,214,000 | 45.9 | Belgium | 1869 | 11,373 | 5,091,300 | 441.5 |
| British Possessions together | 1871 | 12,635 | 1,054,100 | 83.4 | Holland | 1870 | 12,680 | 3,688,800 | 290.9 |
| Jamaica | 1870 | 4,251 | 506,300 | 119.0 | German Empire | 1871 | 308,619 | 41,058,100 | 137.0 |
| Spanish Possessions together | 1870 | 49,480 | 2,063,900 | 43.6 | Prussia, including Lauenburg | 1871 | 124,388 | 24,693,100 | 193.7 |
| Cuba | 1870 | 45,850 | 1,394,500 | 30.4 | Bavaria (Kingdom) | 1871 | 29,292 | 4,861,400 | 165.9 |
| Porto Rico | 1864 | 3,625 | 616,000 | 165.5 | Saxony (Kingdom) | 1871 | 5,779 | 2,558,300 | 442.3 |
| French Possessions | 1868 | 1,017 | 306,300 | 301.0 | Württemberg (Kingdom) | 1871 | 7,532 | 1,818,500 | 241.4 |
| Dutch Possessions | 1870 | 868 | 35,500 | 40.8 | Grand Duchies | 1871 | 18,940 | 3,572,000 | 188.7 |
| Danish Possessions | — | 118 | 87,500 | 817.8 | Baden | 1871 | 5,612 | 1,461,400 | 247.0 |
| Swedish Possessions | — | 8 | 2,900 | 362.5 | Duchies | 1871 | 4,549 | 1,019,400 | 224.1 |
| Haytian Republic | — | 10,205 | 572,000 | 55.0 | Principalties | 1871 | 2,174 | 476,300 | 218.9 |
| Dominican Republic | — | 17,527 | 136,500 | 7.6 | Free Cities, Hamburg and Bremen. | — | — | — | — |
| SOUTH AMERICA. | | | | | Lübeck | 1871 | 368 | 513,700 | 139.6 |
| SOUTH AMERICA (Continent & Islands) | — | 6,959,447 | 25,575,000 | 3.8 | Alsace and Lorraine | 1871 | 5,596 | 1,549,500 | 276.8 |
| United States of Columbia | 1870 | 367,157 | 3,000,000 | 8.4 | Luxemburg | 1871 | 999 | 197,500 | 201.7 |
| Ecuador | — | 218,925 | 1,900,000 | 8.9 | Austrian Empire | 1869 | 240,845 | 35,904,400 | 149.4 |
| Peru | 1871 | 510,450 | 2,500,000 | 4.9 | Bohemia | 1869 | 20,061 | 5,140,500 | 256.3 |
| Bolivia | — | 536,933 | 2,000,000 | 3.7 | Galicia | 1869 | 30,309 | 5,444,700 | 179.6 |
| Chili | 1869 | 122,615 | 2,000,000 | 15.1 | Hungary | 1869 | 52,627 | 11,188,500 | 135.8 |
| Patagonia and Tierra del Fuego | — | 376,462 | 24,000 | 0.06 | Transylvania | 1869 | 21,215 | 2,115,000 | 99.6 |
| Falkland Islands | — | 4,741 | 700 | 0.14 | Switzerland | 1870 | 15,942 | 2,669,100 | 166.9 |
| Venezuela | — | 368,226 | 1,500,000 | 4.2 | Southern States. | | | | |
| British Guiana | 1871 | 99,927 | 152,900 | 1.5 | Spain | 1867 | 192,936 | 16,374,800 | 84.8 |
| Dutch Guiana or Surinam | 1870 | 59,706 | 59,900 | 1.0 | Portugal | 1868 | 54,501 | 2,946,300 | 112.9 |
| French Guiana | — | 35,079 | 25,300 | 0.7 | Italy | 1871 | 114,295 | 26,718,800 | 233.7 |
| Empire of Brazil | — | 2,253,029 | 10,000,000 | 3.0 | Greece | 1870 | 19,353 | 1,457,900 | 75.3 |
| Paraguay | 1871 | 63,781 | 1,000,000 | 15.6 | Turkish Empire (Europe and Asia) | — | 871,738 | 32,895,300 | 37.7 |
| Uruguay | 1871 | 66,721 | 800,000 | 6.5 | Roumania | 1870 | 46,710 | 4,500,000 | 96.3 |
| Argentine Republic | 1869 | 871,848 | 1,812,000 | 2.1 | Servia | 1871 | 16,817 | 1,314,300 | 78.4 |
| Galapagos Islands, to Ecuador | — | 2,954 | unknown | — | ASIA. | | | | |
| Aurora and South Georgia Island | — | 1,736 | uninhabited | — | ASIA (Continent and Islands) | — | 16,923,542 | 794,000,000 | 46.9 |
| AFRICA. | | | | | Russia in Asia | 1870 | 5,944,653 | 10,730,000 | 1.8 |
| AFRICA (Continent and Islands) | — | 11,556,620 | 192,520,000 | 16.07 | Caucasus Lands | 1870 | 169,630 | 4,051,800 | 27.5 |
| North Africa (total) | 1870 | 4,008,638 | 20,420,000 | 5.1 | Siberia | 1870 | 4,717,991 | 3,327,000 | 0.75 |
| Marocco | 1869 | 269,598 | 2,750,000 | 10.6 | Western Asia. | | | | |
| Algeria | 1869 | 268,812 | 2,921,100 | 11.3 | Turkestan | 1871 | 459,306 | 7,870,000 | 17.3 |
| Tunis | 1869 | 45,717 | 2,000,000 | 49.7 | Turkey in Asia | — | 672,521 | 16,468,000 | 24.4 |
| Tripoli, Barka, and Fezzan | — | 344,416 | 750,000 | 2.2 | Arabia | 1871 | 1,024,058 | 4,000,000 | 3.9 |
| Egyptian Dominion | 1871 | 659,104 | 800,000 | 12.1 | Persia | 1870 | 635,965 | 5,000,000 | 7.8 |
| Sahara | 1871 | 2,436,503 | 4,000,000 | 1.6 | Afghanistan (with Herat) | 1870 | 251,165 | 4,000,000 | 15.9 |
| Central Africa (total) | 1871 | 1,449,597 | 77,800,000 | 53.1 | Beloochistan | 1870 | 106,767 | 2,000,000 | 18.7 |
| Middle Soudan | 1871 | 681,094 | 38,800,000 | 61.4 | Eastern Asia. | | | | |
| West Soudan, Senegal and Upper Guinea | 1871 | 818,564 | 38,500,000 | 47.0 | India and British Burmah | 1871 | 1,558,744 | 206,225,000 | 132.3 |
| French Senegambia | 1871 | 96,529 | 219,300 | 2.3 | Ceylon | 1871 | 24,705 | 2,405,300 | 97.3 |
| Liberia | 1871 | 9,576 | 718,000 | 74.9 | Indo-China | 1871 | 752,048 | 21,018,100 | 27.9 |
| Dahomey | 1871 | 3,965 | 180,000 | 47.7 | East Indian Archipelago | 1871 | 799,356 | 32,620,000 | 40.8 |
| British Possessions | 1868 | 17,115 | 577,300 | 33.7 | Chinese Empire | 1871 | 3,741,847 | 446,500,000 | 119.3 |
| Portuguese Possessions | 1869 | 35,878 | 8,500 | 0.2 | China Proper | 1871 | 1,560,512 | 200,000,000 | 128.2 |
| Equatorial Africa | — | 1,522,264 | 43,000,000 | 28.2 | Japan | 1871 | 149,399 | 34,785,300 | 232.8 |
| East Africa (total) | — | 1,594,655 | 29,700,000 | 18.6 | Eastern Turkestan | 1870 | 595,385 | 580,000 | 0.9 |
| Abyssinia | — | 158,384 | 8,000,000 | 18.9 | AUSTRALIA AND OCEANIA. | | | | |
| South Africa (total) | — | 1,965,910 | 16,000,000 | 8.1 | AUSTRALIA (Continent and Islands) | — | 3,425,209 | 4,305,300 | 1.2 |
| Portuguese Possessions (West Coast) | — | 312,522 | 9,000,000 | 28.7 | New South Wales | 1871 | 308,590 | 501,600 | 1.6 |
| Portuguese Possessions (East Coast) | — | 362,254 | 300,000 | 0.8 | Victoria | 1871 | 88,451 | 729,900 | 8.25 |
| Cape Colony | 1871 | 221,211 | 682,600 | 3.1 | South Australia | 1871 | 380,402 | 189,000 | 0.49 |
| Natal | 1867 | 17,801 | 269,400 | 15.1 | Northern Territory | — | 523,531 | — | — |
| Orange River Free State | 1867 | 42,473 | 37,000 | 0.9 | Queensland | 1871 | 698,259 | 120,000 | 0.18 |
| Transvaal Republic | 1867 | 114,358 | 120,000 | 10.5 | Western Australia | 1871 | 975,224 | 24,800 | 0.02 |
| Free Kafir Land | 1867 | 16,035 | 35,000 | 2.2 | Tasmania | — | 26,215 | 98,300 | 3.8 |
| Islands in the Atlantic Ocean (total) | — | 4,094 | 465,000 | 115.2 | New Zealand | — | 106,259 | 294,000 | 2.7 |
| Madeira and Azores | 1868 | 1,311 | 365,500 | 279.1 | New Guinea | — | 274,618 | 1,000,000 | 3.6 |
| Other Islands in the Atlantic Ocean | 1868 | 2,783 | 99,100 | 36.4 | Sandwich Islands | — | 7,633 | 63,000 | 8.2 |
| Islands in the Indian Ocean (total) | — | 233,871 | 6,000,000 | 25.6 | Islands under French rule | — | 11,097 | 75,000 | 7.02 |
| Madagascar | — | 228,573 | 5,000,000 | 21.9 | | | | | |
| Zanzibar | — | 617 | 380,000 | 615.8 | | | | | |
| Other Islands in the Indian Ocean | — | 4,681 | 620,000 | 132.4 | | | | | |

GEOGRAPHICAL AND STATISTICAL TABLES.

TABLE,
SHOWING THE
POPULATION OF THE PRINCIPAL CITIES OF THE WORLD.

| North America. | | North America — Continued. | | North America — Continued. | | South America — Continued. | |
|------------------------------------|-------------|---------------------------------|-------------|----------------------------------|-------------|----------------------------|-------------|
| UNITED STATES. | | | | BRITISH AMERICA. | | ARGENTINE REPUB. | |
| Census of 1870. | Population. | | Population. | | Population. | | Population. |
| I. NORTH ATLANTIC STATES. | | III. S. ATLANTIC STATES. | | MEXICO. | | URUGUAY. | |
| Boston, Mass. | 250,526 | W. Troy, N. Y. | 10,693 | Montreal, P. Q. (1872) | 117,780 | Montevideo | 44,500 |
| Providence, R. I. | 68,904 | Altoona, Pa. | 10,610 | Quebec, P. Q. (1871) | 59,700 | | |
| New Haven, Conn. | 50,840 | Portsmouth, Va. | 10,493 | Toronto, P. O. (1871) | 46,100 | | |
| Worcester, Mass. | 41,105 | Rondout, N. Y. | 10,114 | Halifax, N. S. (1871) | 29,580 | | |
| Lowell, Mass. | 40,928 | Ogdensburg, N. Y. | 10,076 | St. John, N. B. (1871) | 28,990 | | |
| Cambridge, Mass. | 39,634 | | | Hamilton, P. O. (1871) | 26,720 | | |
| Hartford, Conn. | 37,180 | | | St. John's, Newfoundland. (1869) | 22,550 | | |
| Portland, Me. | 31,413 | | | Ottawa, P. O. (1871) | 21,540 | | |
| Lawrence, Mass. | 28,921 | | | | | | |
| Charlestown, Mass. | 28,323 | | | | | | |
| Lynn, Mass. | 28,233 | | | | | | |
| Fall River, Mass. | 26,766 | | | | | | |
| Springfield, Mass. | 26,703 | | | | | | |
| Salem, Mass. | 24,117 | | | | | | |
| Manchester, N. H. | 23,536 | | | | | | |
| New Bedford, Mass. | 21,320 | | | | | | |
| Bridgeport, Conn. | 18,969 | | | | | | |
| Taunton, Mass. | 18,629 | | | | | | |
| Chelsea, Mass. | 18,547 | | | | | | |
| Bangor, Me. | 18,289 | | | | | | |
| Norwich, Conn. | 16,653 | | | | | | |
| Burlington, Vt. | 14,387 | | | | | | |
| Lewiston, Me. | 13,600 | | | | | | |
| Haverhill, Mass. | 13,092 | | | | | | |
| Newburyport, Mass. | 12,955 | | | | | | |
| Newport, R. I. | 12,521 | | | | | | |
| Concord, N. H. | 12,241 | | | | | | |
| Waterbury, Conn. | 10,826 | | | | | | |
| Nashua, N. H. | 10,543 | | | | | | |
| Biddeford, Me. | 10,282 | | | | | | |
| II. MIDDLE ATLANTIC STATES. | | IV. GULF STATES. | | CENTRAL AMERICA. | | RUSSIA. | |
| New York, N. Y. | 942,292 | New Orleans, La. | 191,418 | New Guatemala, Guatemala. | 40,000 | St. Petersburg (1869) | 667,000 |
| Philadelphia, Pa. | 674,023 | Mobile, Ala. | 32,034 | Leon, Nicaragua | 25,000 | Moscow (1867) | 269,300 |
| Brooklyn, N. Y. | 396,099 | Galveston, Tex. | 13,818 | San Jose, Costa Rica. | 25,000 | Warsaw (1867) | 261,600 |
| Baltimore, Md. | 267,354 | Vicksburg, Miss. | 12,443 | S. Salvador, San Salvador | 15,000 | Odessa (1867) | 121,300 |
| Buffalo, N. Y. | 117,714 | San Antonio, Tex. | 12,256 | Managua, Nicaragua | 10,000 | Kishenev | 104,000 |
| Washington, D. C. | 109,199 | Macon, Ga. | 10,810 | Comayagua, Honduras | 8,000 | Riga (1867) | 97,700 |
| Newark, N. J. | 105,059 | Montgomery, Ala. | 10,588 | | | Saratov (1867) | 94,200 |
| Pittsburg, Pa. | 86,076 | | | | | Vilna (1867) | 79,300 |
| Jersey City, N. J. | 82,546 | | | | | Kasan (1867) | 76,600 |
| Albany, N. Y. | 76,216 | | | | | Kiev (1867) | 70,600 |
| Rochester, N. Y. | 62,386 | | | | | Kharkov (1867) | 60,000 |
| Alleghany City, Pa. | 53,180 | | | | | Tula (1867) | 58,100 |
| Richmond, Va. | 51,038 | | | | | Berditchew (1867) | 52,800 |
| Troy, N. Y. | 46,465 | | | | | Astrakhan (1867) | 47,800 |
| Syracuse, N. Y. | 43,051 | | | | | Nijni-Novgorod (1867) | 40,700 |
| Scranton, Pa. | 35,092 | | | | | Voronez (1867) | 41,500 |
| Reading, Pa. | 33,930 | | | | | | |
| Paterson, N. J. | 33,579 | | | | | | |
| Wilmington, Del. | 30,841 | | | | | | |
| Utica, N. Y. | 28,804 | | | | | | |
| Harrisburg, Pa. | 23,104 | | | | | | |
| Trenton, N. J. | 22,874 | | | | | | |

GEOGRAPHICAL AND STATISTICAL TABLES.

POPULATION OF THE PRINCIPAL CITIES OF THE WORLD—Continued.

| Europe—Continued. | Population. | Europe—Continued. | Population. | Europe—Continued. | Population. | Western Asia—Continued. | Population. |
|-----------------------------------|-------------|------------------------------------|-------------|----------------------------|-------------|-----------------------------------|-------------|
| IRELAND. | | BAVARIA. | | GREECE. | | AFGHANISTAN. | |
| Dublin (1871)..... | 295,800 | Bremen (1871)..... | 82,900 | Florence (1873)..... | 167,100 | Candahar..... | 100,000 |
| Belfast (1871)..... | 174,400 | Lübeck (1871)..... | 38,700 | Genoa (1872)..... | 130,300 | Herat (1865)..... | 100,000 |
| Cork (1871)..... | 78,400 | WURTEMBERG. | | Venice (1872)..... | 128,900 | Cabool..... | 70,000 |
| Limerick (1871)..... | 39,800 | Munich (1871)..... | 169,500 | Bologna (1872)..... | 118,000 | BELOOCHISTAN. | |
| FRANCE. | | Nuremberg (1871)..... | 82,900 | Messina (1872)..... | 111,900 | Kelat..... | |
| Paris (1866)..... | 1,825,300 | Augsburg (1871)..... | 51,300 | Livorno (1872)..... | 97,100 | 12,000. | |
| Lyon (1866)..... | 324,000 | Würzburg (1871)..... | 40,000 | Catania (1872)..... | 84,400 | Eastern Asia. | |
| Marseille (1866)..... | 300,100 | Ratisbon (1871)..... | 29,200 | Verona (1872)..... | 67,100 | INDIA. | |
| Bordeaux (1866)..... | 194,200 | BADEN. | | Padua (1872)..... | 66,100 | Calcutta (1872)..... | 447,600 |
| Lille (1866)..... | 154,700 | Mannheim (1871)..... | 39,600 | Modena (1872)..... | 56,700 | Bombay (1872)..... | 644,400 |
| Toulouse (1866)..... | 126,900 | Carlsruhe (1871)..... | 36,600 | Bari (1872)..... | 50,500 | Hyderabad (1870)..... | 400,000 |
| Nantes (1866)..... | 112,000 | Freiburg (1871)..... | 24,600 | Pisa (1872)..... | 50,300 | Madras (1872)..... | 395,400 |
| Rouen (1866)..... | 100,700 | Heidelberg (1871)..... | 30,000 | Parma (1872)..... | 45,500 | Lucknow (1871)..... | 284,800 |
| St. Etienne (1866)..... | 96,600 | AUSTRIA. | | Brescia (1872)..... | 38,900 | Patna (1857)..... | 284,100 |
| Brest (1866)..... | 79,800 | Vienna (1869)..... | 833,900 | Piacenza (1872)..... | 35,000 | Benares (1866)..... | 200,000 |
| Toulon (1866)..... | 77,100 | Pesth, Hungary..... | 200,500 | TURKEY IN EUROPE. | | Delhi (1869)..... | 154,400 |
| Le Havre (1866)..... | 74,900 | Prague, Bohemia (1869)..... | 157,300 | Constantinople (1864)..... | 1,075,000 | Sirinagur..... | 40,000 |
| Reims (1866)..... | 60,700 | Lemberg, Galicia (1869)..... | 87,100 | Bukharest (1860)..... | 121,700 | INDO-CHINA. | |
| BELGIUM. | | Gratz, Styria (1869)..... | 80,700 | Adrianople (1869)..... | 100,000 | Bangkok..... | 500,000 |
| Brussels (1869)..... | 314,100 | Brünn, Moravia (1869)..... | 73,500 | Salonika (1871)..... | 85,000 | Singapore (1869)..... | 150,000 |
| Antwerp (1869)..... | 126,700 | Trieste, Illyria (1869)..... | 120,000 | Jassy (1860)..... | 65,700 | Hue..... | 100,000 |
| Ghent (1869)..... | 121,500 | Szegedin, Hungary (1869)..... | 70,200 | Bona Serai (1867)..... | 50,000 | CHINESE EMPIRE. | |
| Liège (1869)..... | 106,400 | Theresienstadt, Hungary ('69)..... | 56,300 | Gallipoli..... | 50,000 | Su-chau..... | 2,000,000 |
| Bruges (1869)..... | 49,800 | Buda, or Ofen, Hungary (1869)..... | 54,000 | Western Asia. | | Peking (1845)..... | 1,648,800 |
| HOLLAND. | | Cracow, Galicia (1869)..... | 49,800 | RUSSIA IN ASIA. | | Canton..... | 1,236,000 |
| Amsterdam (1869)..... | 264,700 | Presburg, Hungary (1869)..... | 46,500 | (In 1867.) | | Hang-chau..... | 800,000 |
| Rotterdam (1869)..... | 116,300 | SWITZERLAND. | | Tashkend (1868)..... | 80,000 | Fuh-chau..... | 600,000 |
| The Hague (1869)..... | 90,100 | Geneva (1870)..... | 67,400 | Tiflis (1868)..... | 60,900 | Ningpo..... | 400,000 |
| Utrecht (1869)..... | 59,300 | Zurich (1870)..... | 56,700 | Tifis, Georgia..... | 60,900 | Shanghai..... | 276,800 |
| Leyden (1869)..... | 39,300 | Basle (1870)..... | 44,800 | Irkutsk, Siberia..... | 27,400 | Amoy..... | 250,000 |
| Groningen (1869)..... | 37,600 | Berne (1870)..... | 36,000 | Tomsk, Siberia..... | 24,400 | JAPAN. | |
| PRUSSIA. | | Lausanne, Vaud (1870)..... | 26,500 | Tobolsk, Siberia..... | 20,300 | Tokio (Yedo) in 1872..... | 789,000 |
| Berlin (1873)..... | 929,000 | SOUTHERN STATES. | | TURKESTAN. | | Kioto (Miacoo) in 1872..... | 370,000 |
| Breslau (1871)..... | 208,000 | SPAIN. | | Yarkand..... | 120,000 | Osaka..... | 373,000 |
| Cologne (1871)..... | 129,200 | Madrid (1871)..... | 332,000 | Bokhara (1866)..... | 70,000 | Africa. | |
| Königsberg (1871)..... | 112,100 | Barcelona (1860)..... | 189,900 | Kashgar (1869)..... | 65,000 | Cairo (1871)..... | 355,900 |
| Hanover (1871)..... | 104,800 | Sevilla (1860)..... | 118,300 | Kokan..... | 65,000 | Alexandria (1871)..... | 219,600 |
| Frankfort-on-the-Main (1871)..... | 90,900 | Valencia (1860)..... | 107,700 | TURKEY. | | Jakoba, Soudan (1867)..... | 150,000 |
| Danzig (1871)..... | 89,100 | Malaga (1860)..... | 94,700 | Damascus..... | 200,000 | Tunis (1869)..... | 125,000 |
| Magdeburg (1871)..... | 84,500 | Murcia (1860)..... | 80,800 | Smyrna..... | 150,000 | Marocco (1862)..... | 100,000 |
| Stettin (1871)..... | 76,100 | Cadiz (1860)..... | 71,500 | Baghdad (1869)..... | 150,000 | Abeokuta, Guinea (1863)..... | 100,000 |
| Barmen (1871)..... | 74,500 | Zaragoza (1860)..... | 67,400 | Aleppo..... | 100,000 | Fex, Marocco (1868)..... | 100,000 |
| Aix-la-Chapelle (1871)..... | 74,300 | Granada (1860)..... | 60,300 | Beirut (1866)..... | 100,000 | Algiers (1866)..... | 52,600 |
| Altona (1871)..... | 74,100 | PORTUGAL. | | Brusa..... | 60,000 | Khartoom, Nubia (1864)..... | 45,000 |
| Elberfeld (1871)..... | 71,400 | Lisbon (1863)..... | 224,100 | Bassorah..... | 20,000 | Tananarivo, Madagascar..... | 80,000 |
| Düsseldorf (1871)..... | 69,400 | Oporto (1863)..... | 86,300 | Diarbekr..... | 35,000 | Port-Louis, Mauritius..... | 35,000 |
| Crefeld (1871)..... | 57,100 | Braga (1863)..... | 19,500 | Jerusalem..... | 20,000 | Cape-town (1865)..... | 28,500 |
| Posen (1871)..... | 53,400 | ITALY. | | ARABIA. | | Funchal, Madeira..... | 18,900 |
| Halle (1871)..... | 52,600 | Naples (1872)..... | 448,700 | Mecca..... | 50,000 | Oceania. | |
| Cassel (1871)..... | 46,400 | Milan (1872)..... | 262,000 | PERSIA. | | Melbourne, Australia (1871)..... | 193,700 |
| Potsdam (1871)..... | 43,800 | Rome (1872)..... | 244,500 | Teheran..... | 120,000 | Manila, Philippine I. (1858)..... | 160,000 |
| Erfurt (1871)..... | 43,600 | Palermo (1872)..... | 219,400 | Tabriz (1868)..... | 110,000 | Sydney, Australia (1871)..... | 134,800 |
| Frankfort-on-the-Oder (1871)..... | 42,200 | Turin (1872)..... | 207,800 | Ispahan..... | 60,000 | Batavia, Java..... | 118,300 |
| SAXONY. | | FREE CITIES. | | Western Asia. | | Samarang, Java..... | 50,000 |
| Dresden (1871)..... | 177,100 | Hamburg (1871)..... | 240,300 | RUSSIA IN ASIA. | | Honolulu, Sandwich Islands..... | 13,500 |
| Leipzig (1871)..... | 106,900 | EUROPE—Continued. | | RUSSIA IN ASIA. | | Western Asia. | |
| Cheernitz (1871)..... | 68,200 | EUROPE—Continued. | | RUSSIA IN ASIA. | | RUSSIA IN ASIA. | |

POPULATION OF CAPITAL CITIES OF THE UNITED STATES. (Census of 1870, Official.)

| | | | | | | | | | |
|--------------------------------------|---------|------------------------------------|--------|------------------------------------|--------|--|---------|---------------------------------------|---------|
| Albany, N. Y..... | 76,216 | Columbia, S. C. ¹ | 9,298 | Indianapolis, Ind..... | 48,244 | New Orleans, La..... | 191,418 | Santa Fe, New Mex..... | 4,765 |
| Annapolis, Md..... | 5,744 | Columbus, O..... | 31,274 | Jackson, Miss..... | 4,234 | Newport, R. I..... | 12,521 | Springfield, Ill..... | 17,364 |
| Augusta, Me..... | 7,808 | Concord, N. H..... | 12,241 | Jefferson City, Mo..... | 4,420 | Olympia, W. T. ² | 1,203 | St. Paul, Minn..... | 20,030 |
| Austin, Tex..... | 4,428 | Denver, Col..... | 4,759 | Lansing, Mich..... | 5,241 | Providence, R. I..... | 68,904 | Tallahassee, Fla..... | 2,023 |
| Atlanta, Ga..... | 21,789 | Des Moines, Iowa..... | 12,035 | Little Rock, Ark..... | 12,380 | Raleigh, N. C..... | 7,790 | Topeka, Kan..... | 5,790 |
| Boise City, Idaho..... | 995 | Dover, Del..... | 1,906 | Lincoln, Neb. ³ | 2,441 | Richmond, Va..... | 51,038 | Trenton, N. J..... | 22,874 |
| Boston, Mass..... | 250,526 | Frankfort, Ky..... | 5,396 | Madison, Wis..... | 9,176 | Sacramento, Cal..... | 16,283 | Tucson, Arizona T. ³ | 3,224 |
| Carson City, Nev. ³ | 3,042 | Harrisburg, Pa..... | 23,104 | Montgomery, Ala..... | 10,588 | Salem, Oregon ² | 1,139 | Washington, C. T..... | 109,199 |
| Charleston, W. Va..... | 3,162 | Hartford, Conn..... | 37,180 | Montpelier, Vt. ³ | 3,023 | Salt Lake City, Utah T. ³ | 12,854 | Yankton, Dakota T..... | 737 |
| Cheyenne, Wy. T. ³ | 1,450 | Helena, Montana ³ | 3,107 | Nashville, Tenn..... | 25,865 | | | | |

¹ Includes 226 of Insane Asylum.

² Precinct.

³ Township.

GEOGRAPHICAL AND STATISTICAL TABLES.

UNITED STATES EDUCATIONAL STATISTICS (CENSUS FOR 1870).

| States and Territories. | Public Schools. | | | Not Public. Classical, Technical & Professional Schools. | | | Not Public. Other Schools. | | |
|-------------------------|-----------------|-----------|--------------|--|---------|--------------|----------------------------|---------|--------------|
| | Teachers. | Pupils. | Income. | Teachers. | Pupils. | Income. | Teachers. | Pupils. | Income. |
| Alabama..... | 8,008 | 67,268 | \$629,626 | 207 | 4,218 | \$275,856 | 149 | 4,885 | \$71,370 |
| Arizona..... | - | - | - | - | - | - | - | - | - |
| Arkansas..... | 1,936 | 72,046 | 563,461 | 79 | 2,458 | 55,987 | 262 | 7,028 | 73,514 |
| California..... | 1,838 | 75,527 | 1,627,738 | 268 | 4,351 | 1,040,896 | 808 | 5,629 | 271,789 |
| Colorado..... | 156 | 4,517 | 75,025 | 12 | 121 | 5,800 | 20 | 396 | 7,090 |
| Connecticut..... | 2,357 | 88,449 | 1,428,846 | 106 | 1,841 | 265,218 | 468 | 8,331 | 164,220 |
| Dakota..... | 48 | 1,223 | 8,094 | - | - | - | 4 | 82 | 600 |
| Delaware..... | 888 | 16,335 | 127,729 | 68 | 859 | 58,550 | 59 | 1,881 | 31,438 |
| D. of Columbia..... | 918 | 11,182 | 439,929 | 124 | 1,814 | 221,810 | 221 | 6,507 | 150,008 |
| Florida..... | 285 | 10,132 | 76,889 | 82 | 590 | 11,005 | 185 | 8,958 | 67,175 |
| Georgia..... | 827 | 11,150 | 175,844 | 408 | 9,658 | 885,057 | 1,702 | 45,242 | 692,288 |
| Idaho..... | 26 | 1,048 | 16,178 | - | - | - | 7 | 100 | 8,760 |
| Illinois..... | 20,097 | 677,623 | 7,810,285 | 571 | 11,755 | 896,872 | 8,888 | 78,397 | 1,268,272 |
| Indiana..... | 11,042 | 446,078 | 2,063,999 | 826 | 8,387 | 896,511 | 285 | 10,094 | 69,401 |
| Iowa..... | 8,896 | 205,928 | 8,245,852 | 810 | 6,458 | 282,191 | 143 | 5,278 | 42,550 |
| Kansas..... | 1,894 | 58,030 | 680,685 | 78 | 1,181 | 119,241 | 18 | 671 | 7,850 |
| Kentucky..... | 5,351 | 218,240 | 1,151,451 | 648 | 15,542 | 1,042,100 | 852 | 11,857 | 245,078 |
| Louisiana..... | 459 | 25,832 | 478,707 | 449 | 5,192 | 448,325 | 1,008 | 20,147 | 277,652 |
| Maine..... | 6,825 | 152,765 | 943,485 | 219 | 5,891 | 202,374 | 142 | 4,180 | 60,894 |
| Maryland..... | 2,150 | 88,238 | 1,146,057 | 418 | 6,568 | 626,490 | 724 | 17,685 | 225,688 |
| Massachusetts..... | 6,140 | 242,145 | 8,207,826 | 532 | 7,942 | 1,076,428 | 889 | 19,250 | 538,690 |
| Michigan..... | 8,977 | 254,828 | 2,164,489 | 816 | 5,480 | 297,155 | 266 | 6,219 | 85,274 |
| Minnesota..... | 2,738 | 108,408 | 895,204 | 61 | 798 | 76,876 | 77 | 8,065 | 100,189 |
| Mississippi..... | - | - | - | 78 | 1,461 | 96,889 | 1,650 | 41,990 | 688,500 |
| Missouri..... | 7,892 | 320,318 | 8,092,738 | 717 | 12,820 | 661,996 | 949 | 37,204 | 589,079 |
| Montana..... | 46 | 1,544 | 32,925 | 8 | 60 | 1,200 | 11 | 151 | 7,045 |
| Nebraska..... | 818 | 17,052 | 182,180 | 15 | 156 | 16,900 | 14 | 408 | 8,000 |
| Nevada..... | 56 | 1,864 | 81,278 | - | - | - | 28 | 517 | 29,220 |
| New Hampshire..... | 3,110 | 59,408 | 408,810 | 180 | 3,344 | 143,966 | 65 | 1,925 | 27,622 |
| New Jersey..... | 3,016 | 80,105 | 1,662,572 | 108 | 1,571 | 198,347 | 767 | 48,124 | 1,226,380 |
| New Mexico..... | 5 | 788 | 1,000 | 21 | 496 | 16,750 | 46 | 1,124 | 12,130 |
| New York..... | 23,729 | 719,181 | 8,912,024 | 2,049 | 43,728 | 8,732,198 | 8,140 | 99,118 | 8,802,668 |
| N. Carolina..... | 1,518 | 41,912 | 206,181 | 342 | 6,712 | 234,320 | 742 | 16,384 | 196,441 |
| Ohio..... | 21,718 | 787,998 | 8,528,145 | 1,018 | 21,098 | 1,088,999 | 828 | 32,009 | 627,600 |
| Oregon..... | 708 | 29,822 | 189,387 | 99 | 1,745 | 51,128 | 54 | 1,038 | 57,512 |
| Pennsylvania..... | 17,118 | 745,784 | 7,292,948 | 1,301 | 21,205 | 1,719,058 | 1,203 | 44,924 | 616,115 |
| Rhode Island..... | 775 | 27,250 | 855,582 | 42 | 1,106 | 78,550 | 134 | 4,148 | 180,880 |
| S. Carolina..... | 781 | 31,382 | 279,728 | 189 | 2,120 | 206,040 | 188 | 4,767 | 92,190 |
| Tennessee..... | 2,141 | 82,970 | 688,006 | 685 | 19,969 | 647,754 | 761 | 28,192 | 819,980 |
| Texas..... | - | - | - | 57 | 800 | 38,550 | 649 | 22,278 | 381,380 |
| Utah..... | - | - | - | 5 | 120 | 1,500 | 408 | 20,947 | 149,147 |
| Vermont..... | 4,822 | 52,087 | 516,702 | 204 | 4,196 | 112,157 | 394 | 6,650 | 78,438 |
| Virginia..... | 171 | 8,700 | 96,770 | 880 | 6,861 | 509,487 | 2,146 | 44,458 | 547,378 |
| Washington..... | 168 | 4,780 | 38,746 | 12 | 260 | 5,988 | 27 | 479 | 8,668 |
| W. Virginia..... | 2,697 | 101,493 | 599,311 | 78 | 1,672 | 78,406 | 78 | 1,784 | 19,244 |
| Wisconsin..... | 7,669 | 387,008 | 2,209,384 | 176 | 8,800 | 307,558 | 110 | 8,408 | 82,373 |
| Wyoming..... | 4 | 175 | 2,878 | - | - | - | 11 | 180 | 5,600 |
| Total..... | 183,198 | 6,228,060 | \$64,080,678 | 12,767 | 265,190 | \$17,576,907 | 25,077 | 726,688 | \$18,096,146 |

UNITED STATES CENSUS FOR 1870.

With the Population of each decade for half a century.

| States. | 1870. | 1880. | 1890. | 1900. | 1910. | 1920. |
|--------------------|------------|------------|------------|------------|------------|------------|
| New York..... | 4,887,464 | 5,880,735 | 6,097,394 | 7,428,921 | 1,918,608 | 1,872,111 |
| Pennsylvania..... | 5,622,050 | 6,206,215 | 6,311,786 | 7,424,082 | 1,848,233 | 1,047,507 |
| Ohio..... | 2,685,360 | 2,899,511 | 1,980,829 | 1,519,467 | 987,908 | 581,296 |
| Illinois..... | 2,589,891 | 1,711,951 | 851,470 | 476,158 | 157,445 | 55,161 |
| Missouri..... | 1,721,285 | 1,182,012 | 682,044 | 388,702 | 140,455 | 66,557 |
| Indiana..... | 1,680,687 | 1,360,428 | 938,416 | 686,966 | 348,081 | 147,178 |
| Massachusetts..... | 1,457,351 | 1,231,036 | 984,514 | 787,699 | 610,408 | 323,189 |
| Kentucky..... | 1,321,011 | 1,155,694 | 932,405 | 779,828 | 687,917 | 564,185 |
| Tennessee..... | 1,258,520 | 1,109,801 | 1,002,771 | 829,210 | 681,904 | 422,761 |
| Virginia..... | 1,225,168 | 1,596,818 | 1,421,661 | 1,239,797 | 1,211,405 | 1,065,129 |
| Michigan..... | 1,187,294 | 749,118 | 397,664 | 212,267 | 81,689 | 8,765 |
| Iowa..... | 1,194,320 | 674,913 | 192,214 | 43,112 | - | - |
| Georgia..... | 1,184,109 | 1,057,296 | 906,185 | 691,322 | 516,823 | 340,963 |
| N. Carolina..... | 1,071,361 | 775,881 | 805,891 | 80,945 | - | - |
| Wisconsin..... | 1,064,965 | 992,622 | 869,099 | 759,419 | 737,967 | 638,229 |
| Alabama..... | 996,992 | 964,201 | 771,628 | 590,766 | 309,527 | 127,901 |
| N. Jersey..... | 908,036 | 672,085 | 489,555 | 373,806 | 320,322 | 277,428 |
| Minnesota..... | 827,922 | 791,906 | 606,526 | 376,651 | 136,021 | 75,446 |
| Texas..... | 818,899 | 604,215 | 212,692 | - | - | - |
| Maryland..... | 780,394 | 687,049 | 588,094 | 470,019 | 447,040 | 407,360 |
| Louisiana..... | 728,915 | 708,002 | 517,762 | 342,411 | 215,739 | 152,923 |
| S. Carolina..... | 706,606 | 738,708 | 698,507 | 644,388 | 581,185 | 502,741 |
| Maine..... | 628,915 | 628,279 | 588,169 | 501,798 | 399,455 | 298,289 |
| California..... | 582,031 | 879,994 | 92,597 | - | - | - |
| Connecticut..... | 587,454 | 460,147 | 370,792 | 309,978 | 297,575 | 275,148 |
| Arkansas..... | 434,471 | 435,450 | 209,897 | 97,574 | 30,888 | 14,355 |
| Minnesota..... | 446,056 | 172,028 | 6,077 | - | - | - |
| West Virginia..... | 442,014 | - | - | - | - | - |
| Kansas..... | 373,299 | 107,206 | - | - | - | - |
| Vermont..... | 330,551 | 215,098 | 314,120 | 291,948 | 230,652 | 235,968 |
| N. Hampshire..... | 318,300 | 326,078 | 317,976 | 294,574 | 269,328 | 244,622 |
| Rhode Island..... | 214,354 | 174,620 | 147,545 | 108,830 | 97,199 | 83,015 |
| Florida..... | 188,248 | 140,424 | 87,445 | 64,477 | 34,730 | - |
| Nebraska..... | 128,322 | 26,941 | - | - | - | - |
| Delaware..... | 125,015 | 112,216 | 91,532 | 78,085 | 76,748 | 72,749 |
| Oregon..... | 101,883 | 82,445 | 18,294 | - | - | - |
| Nevada..... | 58,711 | 6,857 | - | - | - | - |
| Territories..... | 720,000 | 250,577 | 124,614 | 48,712 | 39,584 | 32,039 |
| Total Union..... | 88,925,598 | 81,448,321 | 78,161,876 | 77,069,458 | 72,966,020 | 69,623,592 |

TERRITORIES, 1870.

| | | | | | |
|-----------------------|---------|-----------------------|--------|-----------------|--------|
| Columbia..... | 181,700 | Indian Territory..... | 68,152 | Montana..... | 39,336 |
| New Mexico..... | 111,308 | Colorado..... | 47,164 | Washington..... | 37,432 |
| Utah..... | 19,581 | Arizona..... | 41,710 | Idaho..... | 20,553 |
| Alaska (unorg'd)..... | 70,461 | Dakota..... | 40,501 | Wyoming..... | 11,518 |

STATISTICS OF AGRICULTURE IN THE UNITED STATES, 1870.

| States and Territories. | Acres of Improved Land. | Wheat, Bushels of. | Indian Corn, Bushels of. | Rice, Pounds of. | Tobacco, Pounds of. | Cotton, Bales of. | Wool, Pounds of. | Butter, Pounds of. | Hay, Tons of. | Cane Sugar, Hhds. |
|-------------------------|-------------------------|--------------------|--------------------------|------------------|---------------------|-------------------|------------------|--------------------|---------------|-------------------|
| 1 Alabama..... | 5,062,304 | 1,055,068 | 16,977,948 | 222,945 | 152,742 | 429,482 | 381,258 | 3,218,758 | 10,618 | 31 |
| 2 Arizona..... | 14,585 | 37,052 | 32,041 | - | 100 | - | 670 | 900 | 109 | - |
| 3 Arkansas..... | 1,859,821 | 747,786 | 18,332,145 | 78,021 | 594,836 | 247,968 | 214,784 | 2,758,981 | 6,889 | 92 |
| 4 California..... | 6,213,133 | 16,676,702 | 1,321,222 | - | 63,909 | - | 11,391,743 | 7,909,744 | 551,773 | - |
| 5 Colorado..... | 95,594 | 258,474 | 232,908 | - | 890 | - | 204,922 | 302,920 | 19,787 | - |
| 6 Connecticut..... | 1,646,752 | 38,144 | 1,570,264 | - | 8,328,798 | - | 254,129 | 6,710,007 | 563,323 | - |
| 7 Dakota..... | 42,645 | 170,632 | 138,140 | - | - | - | 8,510 | 209,735 | 13,847 | - |
| 8 Delaware..... | 698,115 | 896,477 | 8,010,380 | - | 250 | - | 58,316 | 1,171,938 | 41,590 | - |
| 9 D. of Columbia..... | 8,286 | 8,752 | 28,020 | - | - | - | - | 4,495 | 2,019 | - |
| 10 Florida..... | 786,172 | - | 2,225,059 | 401,687 | 157,405 | 39,789 | 37,562 | 100,989 | 17 | 952 |
| 11 Georgia..... | 6,881,366 | 2,127,017 | 17,046,459 | 22,277,380 | 288,596 | 473,934 | 846,947 | 4,499,572 | 10,518 | 644 |
| 12 Idaho..... | 26,808 | 75,650 | 6,760 | - | - | - | 8,415 | 111,480 | 6,986 | - |
| 13 Illinois..... | 19,829,952 | 30,128,406 | 129,921,896 | - | 5,249,274 | 465 | 5,739,249 | 36,068,406 | 2,747,889 | - |
| 14 Indiana..... | 10,104,279 | 27,747,222 | 61,064,588 | - | 9,325,892 | - | 5,029,023 | 22,916,886 | 1,070,768 | - |
| 15 Iowa..... | 9,896,487 | 29,435,692 | 93,965,065 | - | 71,792 | - | 2,967,048 | 27,512,179 | 1,777,889 | - |
| 16 Kansas..... | 1,971,008 | 2,891,196 | 17,025,525 | - | 33,241 | - | 7 | 5,022,768 | 480,289 | - |
| 17 Kentucky..... | 3,108,560 | 7,238,704 | 50,081,006 | 105,306,869 | 1,060 | 2,284,450 | 11,874,978 | 204,399 | 80,706 | - |
| 18 Louisiana..... | 2,046,640 | 9,906 | 7,586,628 | 15,854,912 | 15,541 | 350,532 | 140,428 | 822,406 | 8,776 | - |
| 19 Maine..... | 2,917,738 | 278,788 | 1,080,888 | - | 15 | - | 1,774,168 | 11,636,432 | 1,053,415 | - |
| 20 Maryland..... | 2,914,007 | 5,774,508 | 11,701,817 | - | 15,785,889 | - | 486,218 | 5,014,729 | 223,119 | - |
| 21 Massachusetts..... | 1,736,321 | 34,648 | 1,397,807 | - | 7,312,886 | - | 808,659 | 6,559,161 | 597,457 | - |
| 22 Michigan..... | 5,096,989 | 16,268,774 | 14,066,228 | - | 5,385 | - | 8,726,145 | 24,400,185 | 1,230,922 | - |
| 23 Minnesota..... | 2,322,102 | 18,896,773 | 4,748,117 | - | 8,247 | - | 401,186 | 9,522,010 | 698,033 | - |
| 24 Missi-dippi..... | 4,209,146 | 374,479 | 15,687,316 | 374,627 | 61,012 | 564,938 | 288,285 | 2,618,521 | 2,324 | 40 |
| 25 Missouri..... | 9,130,615 | 15,315,928 | 66,064,075 | - | 12,820,483 | 1,246 | 3,649,390 | 14,455,825 | 615,611 | 40 |
| 26 Montana..... | 84,674 | 131,184 | 820 | - | 600 | - | 100 | 406,080 | 18,727 | - |
| 27 Nebraska..... | 647,731 | 2,125,086 | 4,786,710 | - | 5,968 | - | 74,655 | 1,539,535 | 169,354 | - |
| 28 Nevada..... | 92,644 | 228,966 | 9,660 | - | 25 | 106 | 27,029 | 110,880 | 38,855 | - |
| 29 N. Hampshire..... | 2,394,487 | 198,621 | 1,277,708 | - | 155,834 | - | 1,129,442 | 5,965,060 | 612,648 | - |
| 30 New Jersey..... | 1,976,474 | 2,801,483 | 8,745,384 | - | 40,871 | - | 336,609 | 8,298,023 | 621,975 | - |
| 31 New Mexico..... | 148,007 | 8,232 | 604,823 | - | 8,587 | - | 684,980 | 12,912 | 4,219 | - |
| 32 New York..... | 15,627,296 | 12,173,462 | 16,462,825 | 2,069,281 | 2,949,798 | 144,935 | 10,699,225 | 107,147,526 | 5,614,205 | - |
| 33 N. Carolina..... | 5,268,742 | 2,859,879 | 18,454,215 | - | 11,150,087 | - | 739,667 | 4,297,834 | 83,540 | 35 |
| 34 Ohio..... | 14,469,138 | 27,882,159 | 67,501,144 | - | 18,741,973 | - | 20,539,643 | 50,286,872 | 2,289,566 | - |
| 35 Oregon..... | 1,116,290 | 2,940,746 | 72,138 | - | 8,847 | - | 1,080,938 | 1,418,373 | 75,257 | - |
| 36 Pennsylvania..... | 11,515,965 | 19,722,967 | 34,702,006 | - | 8,467,539 | - | 6,561,722 | 60,834,644 | 2,848,219 | - |
| 37 Rhode Island..... | 289,080 | 74 | 311,957 | - | 798 | - | 77,328 | 941,199 | 89,045 | - |
| 38 S. Carolina..... | 2,010,539 | 788,610 | 7,614,207 | 32,304,825 | 34,806 | 224,500 | 156,814 | 1,461,980 | 10,695 | 1,055 |
| 39 Tennessee..... | 6,848,278 | 6,188,916 | 20,343,814 | 3,399 | 21,496,452 | 181,242 | 1,839,762 | 9,571,969 | 116,582 | 1,410 |
| 40 Texas..... | 2,964,896 | 415,112 | 64,564,538 | 63,844 | 59,708 | 350,623 | 1,261,828 | 3,712,747 | 18,982 | 2,020 |
| 41 Utah..... | 113,765 | 558,473 | 95,567 | - | - | 22 | 109,018 | 310,835 | 27,306 | - |
| 42 Vermont..... | 3,073,267 | 454,708 | 1,699,892 | - | 72,671 | - | 3,102,137 | 17,844,386 | 1,020,669 | - |
| 43 Virginia..... | 8,165,040 | 7,398,787 | 17,949,804 | - | 37,096,364 | 188 | 877,110 | 6,979,266 | 199,838 | - |
| 44 Washington..... | 192,018 | 217,043 | 21,781 | - | 1,692 | - | 162,713 | 407,306 | 30,233 | - |
| 45 West Virginia..... | 5,290,254 | 2,488,543 | 8,197,965 | - | 2,046,455 | 2 | 1,593,541 | 5,044,475 | 224,104 | - |
| 46 Wisconsin..... | 2,989,843 | 26,806,944 | 15,088,998 | - | 980,513 | - | 4,080,670 | 17,373,035 | 1,287,651 | - |
| 47 Wyoming..... | 888 | - | - | - | - | - | 30,000 | 1,200 | 8,180 | - |
| Total..... | 188,921,060 | 237,746,626 | 760,944,540 | 73,635,021 | 262,736,341 | 3,011,996 | 100,102,387 | 514,092,683 | 27,316,048 | 87,043 |

PRONOUNCING VOCABULARY.

In the following vocabulary, every consonant employed in the pronunciation, except *h* and *x*, and every vowel not marked in the manner indicated below, has the sound ordinarily given to it in a similar combination in English words. All marks employed to indicate the pronunciation are the same as are used in the last edition of *Webster's Dictionary*. *h*, *h*, *i*, *o*, *u*, are to be pronounced as in *mate*, *met*, *mite*, *mote*, *mut*. *h*, *h*, *i*, *o*, *u*, are pronounced as in *hat*, *met*, *pit*, *cat*, *hut*. *h*, *h*, *o*, a little shorter than *h*, *h*, *o*. *h* represents the sound of *a* in *far*; and *g* that of *a* in *fall*. *g* is used before *e* and *i*, to represent the hard sound of *g*. *h* is pronounced as in *cañon* (*can-yon*). *g*, pronounced like *s*. *n* expresses no sound, is not pronounced at all; but merely indicates the nasal sound of the vowels which immediately precede it. This sound is peculiar to the French language, and occurs invariably when *on*, *en*, *in*, or *un* terminate a word, or are followed by another syllable beginning with a consonant. The *n* is in such cases silent; and, like *x*, serves only to indicate the nasal sound of the preceding vowel. This sound is expressed in the pronunciation thus: —

This indicates not *ong*, *ang*, *eng*, and *ung*; but that the proper English sound of *o*, *a*, *i* and *u*, becomes nasal, almost precisely as if pronounced with the nostrils closed. The utterance must be finished sharply, with no vanishing sound. *Toulon* is pronounced *too-lon*, *Charente*, *shā-rānt*, etc. The spelling given in American names is that employed in the *United States Coast Survey* and other Government Maps, while *Kerr* Johnston, the great English cartographer, is our authority for the orthography of foreign names.

A.

Aar, āār.
Abeokuta, ā-be-o-kū'ta.
Abbitube, ā-bī-tū'bē.
Abercrombie, ā-bēr-crōm-bī.
Aberdeen, ā-bēr-dēn'.
Abo, ā'bō.
Abomey, ā-bō-mē'.
Abyssinia, ā-bī'sī-nī-ā.
Acapulco, ā-cū-pul'cō.
Acarai, ā-cā-rā'.
Aconagua, ā-cōn-cā'gwā.
Acree, ā'krē.
Ā dū'jā, Span. pron. ā-dū'hā.
Aden, ā'dēn, or ā'dēn.
Adige, ā'dō-jē; Ital. pron. ā'dō-jā.
Ad'ron'dack.
Ad-ri-an-ōple.
Ad'ri-at'ic.
Afghanistan, ā-fgān'is-tān'.
Aguija, ā-gū'yā.
Aguihas, ā-gū'yās.
Aire, ār.
Aix-la-Chapelle, āks-lā-shā'pēl'.
Ajaccio, ā-jā'chō.
Āk'ā-bā.
Āl-g-bā'mā.
Ā'land.
A-lās'kā.
Albacete, āl-bā-sē'tē; Sp. pron. āl-bā-thā'tā.
Āl'banes.
Āl-bā-rā'cōn; Sp. pron. āl-bā-rā-thēn'.
Āl'ba-ny.
Āl-bē-marle'; Eng. āl'bē-marl'.
Āl'bō-rān'.
Albuquerque, āl-by-kēr'kā.
Āl-cā-lā-lā Real, rā'li.
Āl-cān'tā-rā.
Āl-cas'ar.
Ā-lep'po.
Ā-lēs-sān'drī-ā.
Aleutian, ā-lū'shī-ān.
Algeria, āl-jērī-ā.
Algiers, āl-jērs'.
Alaska, āl-yā'kā.
Alicante, āl-kān'tā.
Allahabad, āl'ā-hā-bād'.
Alleghany, āl'le-gā'nī.
Allier, āl-lī-ā'.
Āl-mā-deu'.
Āl-mā'gro.
Āl-mān'zā, or Almanas.
Alpatickee, āl-pā-tī-ō'kē.
Alps, ālps.
Alsace, āl-sās'.
Altai, āl-tā'.
Āl'ten-burg.
Āl'tā-mā-hā'.
Āl'ton.
Ā-lū'ā, or Ā-loo'ā.
Ām'ā-rā-pū'ā.
Am'ar-gō'za.
Am'p-zon.
Am-boise; Fr. Pron. ām'bwā's'.
Am-boy'ng.
Ā-mēr'ī-cā.
Amherst, ām'grēt.

Ā'moo Dā'rī-ā.
Ā-moor'.
Ā-moy'.
Am-rit'sir. [ām'tēr-dām'.
Am'ster-dām'; Dutch. Pron.
Anadyr, ān'ā-dēr'.
Ā-nām'.
Ān-g-tō'lī-ā.
Ān-cō'nā.
Andalusia, ān-dā-lū'shī-ā; Sp.
pron. ān-dā-lū-thā'ā.
An'dā-mān'.
Andes, ān'dēs.
Ān-dor'fā.
Ān'dō-ver.
An'drō-cog'gn.
Angara, āng-gū-rā'.
Anglesey, āng-gēl-sē.
Angola, āng-gō'la.
Ān-gō'rā.
Ān-gōs-tū'rā.
Ān'hāit.
Ān-kō'ber, or Ān-kō'bār.
Ān-nāp'ō-lis.
Ant-ārc'tic.
Antequera, ān-tā-kēr'ā.
Anthony, ān'tō-nī.
An-tō'nī-ō.
An-tī-cō'stī.
Antietam, ān-tē'tām.
Antilles, ān-tē'lī.
Antioch, ān'tō-ōk.
Ant'werp.
Ap'pō-nī-ēs.
Ap'pō-lōch'ee.
Ap'pō-lōch'ī-ān.
Ap'pō-lōch'ī-cō'ā.
Ap'pō-mā't'ox.
Apheron, āp-shā-rōn'.
Apurimac, ā-poo'r-māc'.
Ār'ab.
Arabia, ār-ā'bī-ā.
Ār-ā-fū'ā.
Ār-ā-gōn, or Ār-ā-rā-gōn.
Araguay, ā-rā-gwī'.
Ār'gā.
Ār'gā-rāt.
Ār'kā.
Ār-ā's.
Archangel, ārk-ān'jēl.
Archipelago, ārk'ī-pēl'ā-gō.
Arolic.
Arequipa, ā-rī-kē'pā.
Argentina, ār-jen-tēn.
Arica, ā-rē'cā.
Ār-ī-sō'ng.
Ār-kān'gā.
Ar-mō'nī-ā.
Arnhem, ārn'hēm.
Ār'nō.
Aroe, or Aroo, or Arru, ār'roo'.
Ā-roon'took.
Ās-bēn'.
Ās-cen'yon.
Ā-shān'tā, or Āsh'ān-tā'.
Ās-pīn-wall.
Ās-sām'.
Ās-sin'f-boine.
Astrakhan, ās-trā-kān'.
Asuncion, ā-sūn'sē-ōn, or As-sump'tion.

Ā-tā-cā'mā.
Āt-bā'rā.
Atchafalaya, āch-āf-ā lī'ā.
Atch'f-son.
Auk'ā-bā's-ca.
Ath'ens.
At-lān'tā.
At-lān'tic.
At'lās.
Augustine, āu-gus-tēn'.
Auk'land, or Auck'land.
Au-rō'rā.
Au Sabie, ō-sābī'.
Aus'ter-līts; Ger. ous'tēr-līts.
Australasia, ās'trāl-ā'shā-ā.
Aus-trā'lā.
Aus'tri-ā.
Āv'ā.
Āv'ōn, or Ā'von; Fr. āv'ōn'.
Ax-jūn', or Ax-oom'.
Ayacucho, ā-yā-koo'cho.
Ā-zōres'.
Āz'ōv.

B.

Bāil'tec, or Bāil'bec.
Bā'ūl'.
Bā'el-Mān'dēb.
Babylon, bāb'īlōn.
Bād'qōn, or bād'qōn.
Bāgh-dād', or bāg'dād'.
Bā-hū'mā.
Bahia, bā-ā-ā.
Bāhr ēl Abiad, ā-bē-līd'.
Baikal, bī'kāl'.
Bairuth, bī'rūth.
Bā-lā-kīā'vā.
Bā-l-ā-rā'c.
Balise, bā-lēs'.
Bāl-kān'.
Balkhash, bāl'kash'.
Bāl-mō'rāl.
Bāl'tic.
Bāl'tī-mōre, or bāl'tī-mōr.
Banc'gā.
Bān'dā.
Band-er-mas-sin', or Ban-er-mas-sin, bān-yer-mās-sin'.
Bang'kok'.
Bangor, (in U. S.) bang'gōr; (in Eng.) bang'gēr.
Bā-ra-cā'rī-ā.
Bar-bā-dōq.
Bar-bāry.
Bar-bū-dā.
Bar'cā.
Bar-cō-lō'ng; Sp. pron. bār-thā-lō'nā.
Barnaul, bār-nōw'.
Basel, bās-ēl'. Fr. Bāle, bālī.
Basutos, bā-sū'tōs.
Bā'sō-rāb.
Bā-tā-vī-ā.
Bāth'urst.
Bāton Rouge, bāt'ōn rūsh.
Bā-vā'rī-ā. Ger. Bāler, bī'grn.
Bayonne, bā'yōn'.
Bayou la Fourche, bī'oo lā fūrsh.
Beaufort, (U. S.) bū'fōrt; (Eng.) bū'fōrt; (Fr.) bū'fōrt'.
Bēh'ring.
Beirut, or Beyroot, bē'rūt, or bī-rūt.
Beithlahm, bēi-lām'.
Bel'ed el Jer oed', or Jerid, jer-ēd'.
Bēl'fāst (Ireland), bēi-fāst'.
Belgium, bēl'jī-lum.
Bēl-grade'.
Belle Isle, bēl-īl'.
Bē-loit'.
Bel'oches, bēl-ōō'chēs.
Bel-ōō'chistān'.
Bēn-cōo'lēn.
Bēn Dear'f.
Bēn-ē-ven'tō.
Bēn-gā'l'.
Bengadi, or Benghasy, bēn-gā'sā.
Benguela, bēn-gā'lā.
Benue, bēn'y-ā'.
Bēr'gā.
Bēr'īn'.
Bernudas, bēn-mū'dgā.
Bēr-nard', Saint.
Bērre, or Bērre.
Bēs-kī'dēs.
Beyroot. See Beirut.
Bīn'fā, bēi-fā'.
Bīd'dā-fōrd'.
Bielaya, bē-ā-lī'ā.
Bielostock, bē-ā-lō'stōk, or Bialustok.
Bielukha, bē-ā-lū'kā.
Bīng'gā.
Bīnghampton, bīng'am-tōn.
Bīrmīngham, bēr'mīng-am.
Bīscay, bīs'kā.
Bloemfontein, blēm'fōn-tēn'.
Boecia, bē-ō'shō-ā.
Bō-gō-tā'.
Bō-hē'mī-ā.
Boisē, or Boisé, bō'wā'.
Bokhara, bō-kā'rā.
Bō-lī'vā.
Bologna, bō-lōn'yā.
Bolor, bō-lor'.
Bombay, bōm-bā'.
Dōn.
Boo'thī-ā.
Bordeaux, Bōr'dō'.
Bōr-ne.
Bōr-gū', or Bōr-goo'.
Bōr-ne-o.
Bōr'nōm.
Bōr-nū'.
Bō'nā Serai, ā-rā'e.
Bō's-po-rus, or Bō's-pho-rus.
Bouligne, bō-lōn'; Fr. pron. bō'lōn'.
Brāh'mā-poo'trā.
Brāsh'ear.
Braunfels, brāun'fēls.
Brā'dī', or Brā'sā'.
Brem'gā (in U. S. Brēm'gā).
Bres'lau, or Bres'low.
Brēt.
Bretagne, brētā'ā'.
Breton, brī'tūn.
Brīndī-ā, brīn'de-ā.

Bedouin, bēd'ōō-in.
Bēh'ring.
Beirut, or Beyroot, bē'rūt, or bī-rūt.
Beithlahm, bēi-lām'.
Bel'ed el Jer oed', or Jerid, jer-ēd'.
Bēl'fāst (Ireland), bēi-fāst'.
Belgium, bēl'jī-lum.
Bēl-grade'.
Belle Isle, bēl-īl'.
Bē-loit'.
Bel'oches, bēl-ōō'chēs.
Bel-ōō'chistān'.
Bēn-cōo'lēn.
Bēn Dear'f.
Bēn-ē-ven'tō.
Bēn-gā'l'.
Bengadi, or Benghasy, bēn-gā'sā.
Benguela, bēn-gā'lā.
Benue, bēn'y-ā'.
Bēr'gā.
Bēr'īn'.
Bernudas, bēn-mū'dgā.
Bēr-nard', Saint.
Bērre, or Bērre.
Bēs-kī'dēs.
Beyroot. See Beirut.
Bīn'fā, bēi-fā'.
Bīd'dā-fōrd'.
Bielaya, bē-ā-lī'ā.
Bielostock, bē-ā-lō'stōk, or Bialustok.
Bielukha, bē-ā-lū'kā.
Bīng'gā.
Bīnghampton, bīng'am-tōn.
Bīrmīngham, bēr'mīng-am.
Bīscay, bīs'kā.
Bloemfontein, blēm'fōn-tēn'.
Boecia, bē-ō'shō-ā.
Bō-gō-tā'.
Bō-hē'mī-ā.
Boisē, or Boisé, bō'wā'.
Bokhara, bō-kā'rā.
Bō-lī'vā.
Bologna, bō-lōn'yā.
Bolor, bō-lor'.
Bombay, bōm-bā'.
Dōn.
Boo'thī-ā.
Bordeaux, Bōr'dō'.
Bōr-ne.
Bōr-gū', or Bōr-goo'.
Bōr-ne-o.
Bōr'nōm.
Bōr-nū'.
Bō'nā Serai, ā-rā'e.
Bō's-po-rus, or Bō's-pho-rus.
Bouligne, bō-lōn'; Fr. pron. bō'lōn'.
Brāh'mā-poo'trā.
Brāsh'ear.
Braunfels, brāun'fēls.
Brā'dī', or Brā'sā'.
Brem'gā (in U. S. Brēm'gā).
Bres'lau, or Bres'low.
Brēt.
Bretagne, brētā'ā'.
Breton, brī'tūn.
Brīndī-ā, brīn'de-ā.

Brooklyn, brook'līn.
Bruges, brū'jīs.
Brū-nā'l, almost brū-nī'.
Brusa, or Broussa, brū'sā.
Brus'gā.
Bucharest, by-kā-rēs't'.
Bū'dā.
Buenos Ayres, bū'nus ā'ris; Sp. pron. bū'nōs ā'ris.
Bū'fōrd'.
Bū'k'hā-rest', or Bū'ō'hā-rest'.
Bū'l-gū'rī-ā.
Bur'māh.
Butte, būt.
C.
Cā'dā; Sp. pron. cā'dāth.
Caen, kān.
Ca-haw'gā.
Cajamarca, or Caxamarca, kā-hā-mār'kā.
Cairo, (U. S.) kā'rō; (Egypt) kī'rō.
Calak, kal'ās; Fr. Pron. kā'lā'.
Calcutta, kāl'kū-shoo.
Cal-cut'tā.
Cāl-y-for'nī-ā.
Callao, kāl-lā'ō, or kāl-yā'ō.
Cā-loo'gā-hatch'ō.
Cam'brāy, or Cam'brā; Fr. pron. cām'brā'.
Cām'brī-ān.
Cām'bridge.
Cām-bō'dī-ā.
Cām'dēn.
Cām-er-oon'.
Camagna, kām-pān'yā.
Cām-peach'y.
Cām'pā-dā.
Cām'nā-dī'gā.
Cā-nā'ry.
Cām-ā'v'ā-rā.
Cām-dā-har'.
Cām'dī-ā.
Cañon, kān'yōn.
Cān'tōn (U. S.), Cām-tōn' (China).
Cāp Hāy-tien, hā'tē-ān.
Cā-rā-cās.
Cār'v-bē-gā.
Cār'vūhā, kār'vū-ry.
Cār-nā'r'vōn.
Cār'v-lī'ōgā.
Cār-rōn'dē-lēt.
Cār-pā'thī-ān.
Cār-pēn-tā'rī-ā.
Cār'tā-gō'nā.
Cās'pī-ān.
Casquiere, kā-sē-kē-ā'rā.
Castle, kā'stēl'.
Catharina, cāth-ā-rē'nā.
Catoche, kā-tō'chā.
Cāt-tā-rau'gā.
Cāt'tā-gāt.
Cauca, kow'kā.
Cau'cā-sūs.
Caxamarca, kā-hā-mar'kā.
Cayambe, kā-ām'bā.
Cayenne, kā-ēn'.
Cayuga, kā-yū-gā.

Celebes, sēl'ē-bēs.
Cettigne, chēt-tēn'yā.
Cevennes, sē-vēn'.
Ceylon, sē'lōn, or sē-lōn'.
Chaleur, shā'lūr'.
Champlain, shām-plān'.
Chāng-Chau', or Chāng-Choo'.
Chār'f-tōn.
Charles'ton.
Chāt-tā-hoo'chee.
Chāt-tā-noo'gā.
Chaudiere, shō'ōō-ā-rā'.
Chautauqua, shā-tā'qua.
Chelae, chēl'ē.
Chemnitz, kēm'nīts.
Chemung, shē-mūng'.
Chenango, shē-nāng'gō.
Cherbourg, shēr'boorg'.
Chesapeake, chēs-ā-pēk'.
Cheyenne, shē-ēn'.
Chiapas, chē-ā'pās, or Chiapa, chē-ā'pā.
Chicago, chē-kā'gō.
Chick-a-saw'gā.
Chick-a-pee'.
Chihuahua, chē-wā-wā.
Chili, chī'lī.
Chiloe, chē-lō-ē', almost chēl-wā'.
Chīm'bō-rā'nō.
Chī'nā.
Chō-lū'ā.
Christiania, krīs-tē-ā'nē-ā.
Chudleigh, chūd'lē.
Chuquibambā, chū-kē-bām'bā.
Chuy-quaca, chū-kē-ā'kā.
Cienfuegos, sē-n'fwa'gōō.
Cincinnati, sē-nā-ā'tī.
Cleveland, klēv'lānd.
Clyde, klīde.
Cochabamba, kō-chā-bām'bā.
Cochin-China, kō'chīn chī'nā.
Cō-bōēg'.
Colombā, kō-lōm'bā.
Colima, kō-lō'mā.
Cologne, kō-lōn'.
Colombo, kō-lōm'bō.
Colorado, kō-lō-rā-dō.
Columbia, kō-lūm'bī-ā.
Columbus, kō-lūm'būs.
Comayagua, kō-mī-ā'gwā.
Como, kō'mō.
Comorin, kōm'ō-rīn.
Conception, or tion, kōn-sēp-shūn.
Concord, kōn'kōrd.
Congaree, kōng'gā-rē'.
Congo, kōng'gō.
Connecticut, kōn-ē-tī-kūt'.
Constantinople, kōn-stān'tī-nō'pl'.
Coosa, koo'sā.
Copenhagen, kō-pēn-hā'gān.
Coral, kō'rāl; (Brazil) kō-rāl'.
Cordova, kōr'dō-vā.
Cores, kō-rē'gā.
Corentyn, kō-rēn'tīn'.
Corfu, kōr-fō', or kōr'tū.
Corrientes, kōr-ēn'tēs.

ā, ē, i, ō, ū, as in mēte, mīte, mōte, mūte.
g, as in dg; ō, as in dōne; ū, as in ryde like ōō; y, as in push; ē, as in tērm; g, g, g, somewhat like ū, as in fra'grānt, Sa'lēm, Hud'son.

ā, ē, i, ō, ū, as in āt, pēt, it, nōt, ūp.

ā, ē, i, ō, ū, as in cāre, thēre, fīrm, fōr, fūrl.

ā, as in fār; ā, as in lāst; g, as in fāll; th, as in thīn; tr, as in wīth; n, nearly like r.

PRONOUNCING VOCABULARY.

Corrientes, kôr'ri-ê-kp.
Coruna, kô-rjua'.
Costa Rica, kô'stâ rî-kâ.
Covington, kûv'ing-tôn.
Crimas, krîm-s'g.
Cuba, kû'ba.
Cullacua, kû-lâ-kân'.
Cumana, kû-mâ-nâ'.
Cutch, kû'tch.
Cusco, kû'sko.
Cyprus, si'prûs.

D.

Dahomey, dâ-hô'mâ', or dâ-hô'mô.
Dakota, dâ-kô'ta.
Dalton, dâl'ton.
Damarus, dâ-mâs'us.
Damietta, dâm'i-ê-ta.
Danube, dâ-nû-be.
Danzig, or Dantsie, dânt'sig.
Darfen, (Isthmus) dâ-rê-en'; (Georgia) dâ-rî-sû'.
Darmstadt, dârm'stât.
Dartmouth, dârt'muth.
Daveport, dâv'gû-pôrt.
Dayton, dâ'tôn.
Decatur, dâ-kâ'tur.
Deccan, dâk'an.
De la Hague, dâ-lâ hâg.
Delaware, dâ-lâ-wâr.
Delhi, (U. S.) dâ-lî; (Asia) dâ-lî.
Delgado, dâ-gâ'do.
Dém-ê-râ.
Demavend, dâ-mâ-vând'.
Denmark, dâ-n'mark.
Denver, dâ-n'vgr.
Des Moines, dâ-môin', or dâ-môin.
Detmold, dâ'tmôlt.
Dhawalagiri, dâ-wôl'gâ-gîrî.
Diamantina, dâ-mân-tâ-nâ.
Dinard, dî-nâr'tk.
Dnieper, nâ'pgr.
Dniester, nâ'stgr.
Domingo, dô-ming'gô.
Dominica, dôm'i-nâ-kâ.
Doña Ana, dônâ 'nâ.
Doubt, doob, or doob.
Douro, doo'ro.
Dras, drâ.
Draken Berge, drâ'kân bôrg'g.
Drave, drâv'.
Dresden, drêz'dn.
Drina, drî-nâ.
Dubuque, dâ-bûk'.
Duero, dî-â-ro.
Duluth, dî-lî-th'.
Dumfries, dûm-frîs'.
Duna, dî-nâ.
Dunbar, dûn-bâr'.
Dunedin, dūn-êd'in.
Durand, dû-rân'd'.
D'Urban, dû'r-bân'.
Dwina, dwî-nâ.

E.

Ecuador, êk-wâ-dôr'.
Edinburgh, êd'in-bûr'rî.
Edisto, êd'i-stô.
Egripos, â-grû-pôos.
Ehennach, î'gên-âk.
Elba, êl'ba.
Elbe, êlb.
Elburz, êl-bûrz'.
El Dorado, êl'dô-râ-dô.
Elena, êl'â-nâ.
El Gran Chaco, êl grân châ'kô.
El Kads, êl kâdz'.
El Mecherif, êl mâ'châ'rîf.
El Obeld, êl ô-bâ'êd.
El Pâ'êd.
El Rosario, êl rô-sâ'rîô.
Em-pô'rî-â.
En Nasirah, ên nâ-sâ'râ.
Entre Douro, ênt'r' doo'rô.
Ephesus, êf'ê-sus.
Erebus, êr'ê-bus.

Erie, êr-ê.
Er Rîjad, êr rî-yâd'.
Ers, êrs.
Erzerum, êrs'ê-rjûm.
Espinhoço, ês-pên-yâ'pô.
Esquilmaux, ês'kî-mô.
Essequibo, ês-ê-kî'bo.
Es Sioot, ês-ê-sî-ôv'.
Estremadura, ês'trâ-mâ-dî-g'râ.
Etna, êt'nâ.
Etienne, â'tî-ên'.
Euboea, û-bâ'â.
Eufaula, û-fâ'fâ.
Euphrates, û-frâ'tês.
Eyre, âr.

F.

Falkland, fâk'lând.
Falmouth, fâl'mûth.
Faroe, fâ'rô.
Fayal, fî-âl'.
Fayoom, fî-oom'.
Feejee, fî-ê-ê.
Felipe, fâ-lî-pâ.
Fellatah, fêl-lâ'tâ.
Fernandina, fêr-nân-dî-nâ.
Fernando Po, fêr-nân-dô pô'.
Ferrara, fêr-râ-râ.
Fés.
Fexman, fêz-ân'.
Fingal, fîng-gâl'.
Finisterre, fîn'îs'têr'.
Flord, fî-ôrd'.
Flôrî-dâ.
Fond dâ Lâo.
Foo-choo'.
Foosiyama, foo-sî-yâ-mâ.
Fool's Jâ-lôn'.
Formosa, fôr-mô'sa.
Fort Wayne, fôrt wân'.
Frank'fort.
Frederica, frêd-gr-lâh'ê-mâ.
Fred'or-îck-burg'.
Friesche Haaf, frêsh'ê hâf'.
Fû'câ.
Fuh-Chau, fûô chôw'.
Fuegos, fî-yâ'g'ê.
Fufukirchen, fûnf-kîr'gên.
Fusiyama, fû-sî-yâ-mâ'.

G.

Gairdner, gârl'ngr.
Galapagos, gâ-lâ-pâ-gô's, or gâ-lâ-pâ-gô's.
Galatz, gâ'lâts.
Galena, gâ-lî-ng.
Galicia, gâ-lî-sh'ê-g.
Gall, Sâint, sânt gâl.
Gallinas, gâ-lî-ng.
Galveston, gâ'l-vgr-tôn.
Gambia, gâm-bî-g.
Ganges, gân'gê.
Garonne, gâ-rôn'.
Genesee, jên-gê-ê'.
Genesee, jên-gê-ê'.
Geneva, jê-nê-vâ.
Genoi, jên'ô-g.
Georgia, jô'r-jî-g.
Gera, gî-râ.
Géral, shâ'râl.
Germany, jêr'mg-nî.
Ghadames, gâ-dâ-mê's.
Ghâ'râ.
Ghat, ghât.
Ghauts, gauts.
Ghee'gâ, or Ghee'gâph.
Ghent, gî-ênt.
Gibraltar, jî-brâ'l'tgr.
Glessen, gî-ê-sên.
Gila, nî'lâ: (U. S.) gî-lâ.
Gloilo, jê-lî-lî.
Glasgow, glâs-gô.
Gloucester, glô's'tgr.
Gon, gô'â.
Gobi, gô'bî.
Godavery, gô-dî-vgr-î.
Gondar, gôn'dâr.
Gondokoro, gôn-dô-kô'rô.
Gon-gô'lâ.

Göteborg, yô'tâ-bôrrg'.
Gotha, gô'tâ.
Gothland, gôth'lând.
Gottenburg, gô't-gn-burg.
Göttingen, gô't'ing-en.
Gramplan, grâm'plân.
Gratz.
Greenwich, grîw'ij in Eng.; grên'ich in U. S.
Grenada, grî-nâ-dâ.
Grennah, grên'â.
Gren-ô-bîe.
Gron'ing-en.
Guadalajara, or -xara, gwâ'dâ-lâ-hâ'râ.
Guadalope, gwâ-dâ-lô-pâ.
Guadalquivir, gwâ-dâ-kwî'r'gr.
Guadalupe, gwâ-dâ-lô-pâ, or gwâ-dâ-lô-pâ'.
Guadiana, gwâ-dâ 'nâ or gwâ-dâ-â-nâ.
Guantanamo, gwâ-nâ-nwâ'tô.
Guar'dâ.
Guardafui, gwâr-dâ-fwê', or gâr-dâ-fwê'.
Gautama, gwâ-tâ-mâ'gâ, or gwâ-tâ-mâ'gâ.
Guayaquil, gwî-â-kîl'.
Guaymas, gwî-mâs.
Guayra, gwî-râ.
Guiana, gwî-nâ.
Guinea, gwî-nâ.
Guineadotte, gwî-nâ-dô't, formerly called Gî-ân-dô't.

H.

Hadrarnaut, hâd-râ-mowt' or hâ-drâ-mowt'.
Hague, hâ-g.
Hain'ner-fest.
Hang-chau', or Hang-choo'.
Hanover, hân'ô-vgr.
Hardt, hârt.
Harrsburg, hâ'r-lâ-bûrg.
Hartford, hârt'fôrd.
Hatchee, hâch'ê.
Hatteras, hât'tgr-âs.
Havana, hâ-vân-gâ.
Haverhill, hâv'gr-îl (Eng.), hâ-vgr-îl (Mass.).
Havre, hâv'r.
Havre de Grace, hâv'r dâ grâs.
Hawaii, hâ-wâ'ê.
Hayti, hâ'tê.
Hebrides, hê-b'rî-dês.
Heidelberg, hî'del-bêrg'.
Hekla, hêk'lâ.
Helena, hê-lî-ng (for the Island St. Helena); hê-lî-ng (Arkansas).
Herat, hgr-ât'.
Herculaneum, hêr'kû-lâ-nô-um.
Hernnhut, hêrn'hû-tâ.
Hesse.
Hildburghausen, hîlt-bûg-hôw-sân.
Himalaya, hîm-gâ-lâ-yâ.
Hindoo Koosh, hîndôo kôsh.
Hindustan, or Hindoostan, hînd-ô-stân.
Hoangho, hô-âng'hô, almost whâ'ng'hô'.
Hoel-ho, hô-ê'hô'.
Ho'ng-nô-be.
Holly, hôl'î.
Holmes, hôms.
Holston, hôl'stôn.
Holyoke, hôl'yôk.
Honesville, hôns'vîl.
Hongkong, hông'kông'.
Honolulu, hôn-lô-lô'.
Hoo'gly.
Hoosac, hô-sâk.
Housatonic, hô-sâ-tôn'îk.
Huallaga, wâl-yâ-gâ, or hwal-yâ-gâ.
Huamanga, wâ-mâng-gâ.
Hue, hû-ê'.
Huelva, wêl'vâ.

Huesca, wê'skâ.
Humaita, o'mâ-ê'tâ.
Hungary, hûng'gâ-rî.
Hyderabad, hî'dgr-â-bâd'.
Hydrabad, hî'dgr-â-bâd'.

I.

I-bê'rî-gâ.
Idaho, î-dâ-hô.
Ig-nâ-ô-ô.
Iguazu, î-gwâ-sô.
Illinois, î-lî-noîs or -nôl'.
Most prominent teachers in the State pron. it î-lî-noîs.
I-mâm'.
India, îndî-gâ.
Indiana, îndî-ân-gâ, or îndî-ân-gâ.
Indian, îndî-gân.
Indianapolis, îndî-ân-âp'g-îlîs.
Indiana, îndî-gâ-nô'î-gâ.
Indies, îndîs.
Indo-China, îndô chî'ngâ.
Indre, ândr'.
Indus, îndûs.
Inak'lah, or ain'â-lâh.
Interlachen, înter-lâk'gân.
I-o'nî-an.
Iowa, îwâ.
Iput, î-pû-tô.
Iran, î-rân'.
Irawaddy, î-râ-wôd'î.
Ireland, îr'lând.
Irkutak, îr-kô'tâk'.
Irish, îr'îsh; Russ. îr-rîsh.
Isay, î'â.
Ismaïlia, îs-mâ-î'lî-yâ.
Isapahan, îs-pâ-hân'.
Is'âk-kul', -kool.
Istria, îs'trî-gâ.
Italy, ît'gâ-îl.
Itambe, î-tâm'bâ.
Itapua, î-tâ-pû-â.
Itataya, î-tâ-tê-î'lî-yâ.
Ithaca, îth-â-gâ.
Itacochuati, îs-tâk-ê-hwâ'tî'.

J.

Jab'kan, or Schab'kan.
Jacinto, jâ-sîntô.
Jaen, hâ-on'.
Jago, jâ-gô.
Jakoba, jâ-kô-bâ.
Jalonnitza, yal-on-nî'tzâ.
Jalon, hâ-lôn'.
Jâm'mâ.
Japan, jâ-pân'.
Japura, hâ-pô'râ.
Jassy, yâ'ssê.
Java, jâ-vâ, or jâ'vâ.
Jen, shân.
Jebel Shammâr, jêb'el sham-mâr'.
Jid'dah.
Jihoon, jî-hôon'.
Jî-lî-ô.
Jitomir, shî't-ô-mêr'.
Joliet, jô-lî-ê-t.
Jôn'kôping, yên'chê-pîng.
Jorullo, nô-rô'l'yô, often pron. nô-rô'yô.
Juan de Fuca, jû'ân dâ fû'kâ; Sp. pron. nô-ân dâ fô'kâ.
Juan Fernandez, jû'ân fêr-nân-dêz; Sp. pron. hoo-ân fêr-nân-dêth.
Jub, jôb'.
Jüling, yû'îng.
Jumna, jûm'nâ.
Jungfrau, yong'frow.
Junata, jû-nî-â'tâ.
Junk Seylon, jûnk sê-lôn.
Jura, jû'râ; Fr. pron. shû'râ'.

K.

Kadr, kâ'fîr.
Kalaharî, kâ-lâ-hâ'rî.
Kalamaro, kâ-lâ-mâ-sô'.
Kama, kâ'mâ.

Kamchatka, kâm-chât'kâ.
Kân-â-gâ-wâ'.
Kanawha, kan-nâ-wâ.
Kandahar, kân'dâ-hâr'.
Kanem, kâ'nem.
Kankakee, kâng'kâ-kâ'.
Kano, kâ'nô'.
Kara, kâ'râ.
Kâ-râ-kôom'.
Karakorum, kâ'râ-kô'rûm.
Karlstadt, kârl'stât.
Karroo, kâr-rôo'.
Kasan, or Kaman, kâ-sân'.
Kashgar, kâsh-gâr'.
Kaskaskia, kâs-kâs'kî-gâ.
Katahdin, kâ-tâ'dîn.
Kattywar, kât-tâ-wâr'.
Kâs'vîo.
Kearney, kâr'nî.
Kearse, kâr'sê.
Keewawona, kâ-wî-wô'nâ.
Kelat, kâ-lâ't.
Kenai, or Kenay, kâ-nâ'ê.
Kenia, kâ-nî-gâ.
Kennebec, kên-nê-bêk'.
Kenosha, kên-ô-shâ.
Keokuk, kî'ôk'ûk'.
Kerguelen, kêrg'g-îgn; Fr. pron. kâ-g-îgn.
Khamli, kâ-mîl'.
Khanat, kân'at.
Khartoom, kâr-kôom'.
Khatanga, kâ-tâng'gâ.
Khatmandoo, kâ't-mân'dôo'.
Khiva, kâ'vîâ.
Klacha, or Klakhta, kâ-âk'tâ.
Kiel, kîl'.
Kiev, kâ-êv'.
Kilima Njaro, kîl'mâ-njâ-rô'.
Kingkitoa, kîng-kê-tâ-ô'.
Kin-tê-ching, kîng'tâ-chîng'.
Kioto, kî-ô-tô'.
Kirghiz, kîr'gîz'.
Kisanga, kî-sang'gâ.
Kisheneu, kîsh'ê-nêv'.
Kis'ing-gân.
Kizil Irnak, kîzîl êr'mâk'; Turk pron. kîzîl êr-mâk'.
Klamath, klâm'ât.
Kob'bel.
Kokan, kô'kân'.
Kolomea, kô-lô-mâ-rô'.
Kolyma, kô-lô-mâ', or kô-lô-mâ'.
Königsgratz, kên'î-grâts.
Königsberg, kên'î-gâ-bêrg.
Koo-chân'.
Kô-râ-sân'.
Kronstadt, krôn'stât.
Kuenlun, kwen'lôon'.
Kulkuu, kûl-kûn'.
Kumasi, kôo mâ'sî.
Kurdistan, kô'r-dîs-tân'.
Kurle, kô'rîl'.
Kurrachee, kûr'â-chê'.

L.

Laaland, lâ'lând, or lî'lând.
Labrad'or, lâb'râ-dôr'.
Laccadive, lîk'â-div'.
Lachlan, lâk'lân.
La Chute, lâ shû't.
La Crosse, lâ krô's'.
Ladoga, lâd'ô-gâ; lâ-dô'gâ in U. S.
Ladron, lâ-drôn'.
Laga, lî-gâ.
Lago, lî-gô.
La Guayra, lâ gwî'râ.
Laguna Madre, lâ-gô-nâ mâr'â.
Lahore, lâ-hôr'.
La Mesilla, lâ mî-sî'lî-yâ.
La Mollie, lâ-môl'î.
Lân-chau'.
Landes, lânds.
Lansing, lân'sîng.
Laon, lâ-ôn'.
Laos, lâ-ôus.

La Paz, lâ pâ; Sp. pron. pâth.
La Plata, lâ plâ'tâ.
Lamelle, lâ-mîl'.
Lassa, or Lham, lâ'sâ.
Laurentian, lâ-rî-ên.
Lausanne, lâ-sân'.
Leavenworth, lî-vên-wôth.
Lebanon, lî-bân'.
Leocompton, lî-ôom'pôn.
Leeuwin, lî-ê-wîn.
Lehigh, lî'gî.
Leicester, lî-sî-ê-ê.
Leipzig, lî-pî; Sp. pron. lîp'tsê.
Leiria, lî-rî-â.
Lemberg, lî-bêrg; Germ. pron. lêm'bêr'.
Lena, lî-nâ; Russ. pron. lî-nâ.
Lerida, lî-rî-dâ.
Les Gonaïves, lî-gônâ-îv'.
L'évêque, lî-êv'.
Leyden, lî-dên.
Leyte, lî-ê'tê.
Liberia, lî-bê-rî-â.
Lichtenfels, lîkht'n-fêls'.
Lichtenstein, lîkht'n-stêin'.
Liegwitz, lî-ê-wîts'.
Lien chau, or Lien chau, lî-ên chaw'.
Lille, lîl', or lî.
Lima, lî-mâ (Peru); Sp. (U. S.).
Limpopo, lîm-pô-pô.
Lindesnes, lînd-ê-nês.
Lipari, lî-pâr'î.
Lippe, lî-pê.
Lisbon, lîs'bôn.
Livorno, lî-vô-rô.
Llano, lî-yâ-nâ.
Llano Estacado, lî-yâ-nâ-êstâ-dâ.
Llullallaco, lî-ullâ-lâ-kô.
Loango, lî-ô-âng-gô.
Lofoden, lî-fô-dên.
Loire, lî-wâ.
Loja, lî-ô-â.
Lombard, lî-ô-mbârd'.
Loo Choo, lî-ô-cho.
Lopatka, lî-pât'kâ.
Lorraine, lî-rî-ân'.
Los Angeles, lî-ô-â-njêl's.
Los Pinos, lî-ô-pî-nôs.
Louis, lî-ô-î-gâ, or lî-ô-î-gâ.
Louisade, lî-ô-î-gâ.
Louisiana, lî-ô-î-sî-ân-gâ.
Louisville, lî-ô-î-sî-ân-gâ; Sp. pron. lî-ô-î-sî-ân-gâ.
Lübeck, lî-bêk'.
Luca, lî-ô-â-kâ, or lî-ô-â-kâ.
Lucero, or Lucero, lî-ô-êr'.
Fr. pron. lî-ô-êr'.
Lucknow, lîk'nô.
Lupata, lî-ô-pâ-tâ.
Luxemburg, lîk'sm-bûrg'.
Luzerne, lî-ô-êr-nê.
Luzon, lî-ô-sôn'.
Lyon, lî-ôn', or lî-ôn'.
Lyons, lî-ôn.

M.

Macao, mâ-kâ-ô, or mâ-kâ-ô'.
Macassar, mâ-kâ-sâr'.
Machias, mâ-chî-âs'.
Mackenzie, mâ-kê-nî-ê'.
Macan, mâ-kân (U. S.); Sp. pron. mâ-kân'.
Madagascar, mâ-dâ-gâ-sâr'.
Madeira, mâ-dê-rî-â; Sp. pron. mâ-dê-rî-â.
Madras, mâ-drâs'.
Madrid, mâ-drîd' (Spain); mâ-drîd' (U. S.).
Magalhães, mâ-gâ-lî-âs'.
Magdala, mâ-gâ-dâ-lâ.
Magdalen, mâ-gâ-dâ-lên.
Magdalena, mâ-gâ-dâ-lên-gâ; Sp. pron. mâ-gâ-dâ-lên-gâ.
Magdeburg, mâ-gâ-dê-bûrg'.

PRONOUNCING VOCABULARY.

[illegible]

Q, as in dq; ô, as in dône; y, as in ryde like ô; v, as in vush; ð, as in ðern; æ, æ, ø, somewhat like ü, as in fra'grænt, Sa'l'em, Hud'son. th, as in thin; rh, as in with; v, nearly like rh.

PRONOUNCING VOCABULARY.

Sault St. Mary, Fr. pron. sô
sân mâr'ô, but now usually
called sô sânt mâr'i
Savannah, sâ-vân'g.
Sav, sâv, or sâv.
Sav'oy, or sâv'wâ.
Saxony, sâks'ô-nî.
Scandinavia, skân'dî-nâ'vî-g.
Schachow, shâ-chow'.
Schaffhausen, shâf-how'zen.
Schauenburg, shôw'gên-burg.
Schelde, or Scheldt, skêlt.
Scheneectady, skê-nêk'tâ-dî.
Schleswig, shlêswîg.
Schuykill, skôo'kîl.
Schwerin, shwâ-rên'.
Scilly, sîl'î.
Scio, sî'ô.
Scioto, sî-ô'tô.
Scutari, skôo'tî-rê.
Scuttle, sô'tîl.
Sebastopol, sêb'stô'pôl.
Sô-dân'.
Seeland, sê'lând.
Segura, sî-gû'râ.
Selma, sêl'mâ.
Selvas, sêl'vâs.
Senn, sê'n.
Sennar, or Sennar, sên-nâr'.
Seneca, sên'ê-kâ.
Sengul, sên'g-gûl'.
Senegambia, sên'g-gîm'bî-â.
Serlingur, sêr'îng-gûr.
Serra Espinhaço, sêrr'â ês pên-
yâ'ô.
Sêr'vî-â.
Seyern, sêv'gên.
Severo, sê-vâ'rô.
Sevilla, sê-vêl'yâ.
Seychelles, sê-shêl'.
Shanghai, shang'hî'.
Sharon, shâr'ôn.
Shasta, shâs'tâ.
Shawangunk, shong'gûm.
Sheboygan, shô-boi'gân.
Sherchem, shêk'gên.
Shenandoah, shên'an-dô'g.
Siam, sî-âm', or sê-âm'.
Siberia, sî-bêr'î-g.
Skelly, skê'lî.
Sidra, sîd'râ.
Sierra Acaria, sê-ên'â â-kâ-rî'.
Sierra de Gata, gâ'tâ.
Sierra Leone, sî-êr'g lî-ô'nê;
Sp. pron. sê-ên'â lî-ô'nâ.
Sierra Madre, sê-ên'â mâr'râ.
Sierra Morena, sê-ên'â mô-
râ'nâ.
Sierra Nevada, sê-ên'â nâ-
vâ'nâ.
Sihoon, sî'hôon'.
Sikhota Alin, sê-kô'tô âlin.
Si-kok'.
Sinai, sî'nâ, or sî'nâ-î.
Sinaloa, sîn-â-lô'â.
Sinde, sînd'.
Singapore, sîng'gâ-pôr'.
Sing Sing, sîng'sîng.
Sloot, sî-ôot'.
Sioux, sî-ô; Fr. pron. sê-ôô'.
Sistona, sîs-tô'râ.
Sitka, sî'tkâ.
Siwah, sî'vâ.
Skager Rack, skâg'gêr râk.

Skaneateles, skân-â-ât'î-gs.
Skopelo, sko-pâ'lo.
Sky'ros.
Smirna, smîr'nâ.
Sneeuw, snê-ôô'.
Snowdon, snô'dôn.
Sobat, sô'bât.
Socorro, sô-cor'rô.
Socotora, sô-kô'trâ, or sôk'ô-
trâ.
So-fala, sô-fî'lâ, or sô'fî-lâ.
Sokoto, sô-kô'tô.
Solon, sô'lôn.
Somali, sô-mâ'lî.
Sonora, sô-nô'râ.
Soongaria, sôong-gâ'rê-â.
Sorata, sô-râ'tâ.
Sor'ên'to.
Soudan, sôo'dân'.
Spartel, spâr'têl'.
Spartivento, spâr'tê-vên'to.
Spitzbergen, spîts-bêrg'gên.
Spô-kîne'.
Spre, sprâ.
Staffa, stâf'gâ.
Stanovoï, stân'ô-vôl'.
Staten, stât'gên.
Staunton, stân'tôn in Virginia,
stân'tôn, or stân'tôn in Eng.
Stellacoom, stî-lâ-koom'.
Stettin, stê'tîn'.
Steubenville, stê'bên-vîl'.
Stockholm, stôk'hôlm.
Stockton, stôk'tôn.
Stralsund, strâl'sôund.
Strellitz, strêl'tîts.
Stuttgart, stût'gârt; Ger. pron.
stût'gârt.
Su-chau', or su-chow', or Soo-
chow'.
Suchona, soo-kô'nâ.
Sucre, soo'krâ.
Sudetic, sî-dê'tîk.
Suez, sôo'g; Arab pron.
sôo-êz', or sôo-âz'.
Suliman, sîl'mân.
Syl'îy', or Soo-loo', or Zulu.
Sumatra, sôo-mâ'trâ.
Sumbawa, sîm-bâ'wâ.
Sunapee, sîn'â-pê.
Sunda, sîn'dâ.
Sungari, sîng-gâ'rê.
Surabaya, sôo-râ-bî'lî.
Surat, sôo-râ'tî.
Surinam, sôo-rî-nâm'.
Sutlej, or Sutlej, sût'lêj.
Suwanee, sî-wâ'nâ.
Swansea, swôn'sê.
Swartwout, swâr'twout.
Sweden, swê'dên.
Switzerland, swîts'gr-îand.
Syene, sî'ô-nê.
Syra, sî'râ.
Syrmace, sîr'gâ-kûs.
Syria, sîr'î-â.
Szegedin, sêz'gê'dên', or sêz-
gê'dên'.

T.

Tabatinga, tâ-bâ-tî-g'gâ.
Ta'bor, tâ'bor, or tâ'bor.
Tad'mor.
Taflelt, tâ-fê-lêl't.
Tagua, tâ'gûs.

Tahoe, tâ-hô'.
Tahlequah, tâ'hê-kwâ'.
Tahiti, tâ-hî'tî.
Tallahassee, tâ'hâ-hâ-ê.
Tallapoosa, tâ'hâ-pôo'gâ.
Tampa, tâm'pâ.
Tampico, tâm-pê'kô.
Tananarivo, tâ-nâ-nâ-rê-vôô'.
Taungnyika, tân-gûn-yô'kâ.
Tangler, tân-jêr'.
Tao, tâ'ô, almost tow.
Taos, tâ'ô, almost tous.
Tapajos, tâ-pâ'zhos, or tâ-
pâ'hôs.
Tapaling, tâ'pâ'îng'.
Taranto, tâ-rân'tô.
Taria, tâ-rê'fâ.
Tariim, tâ'rîm.
Tarnov, târ'nôv.
Tarus, tâ'rûs.
Tash-kend', or tash-kên't'.
Tasmania, tâs-mâ'nî-â.
Ta Shue Shan, tâ sê-wâ-shan'.
Taunton (Eng.), tân'tôn.
Taunton (U. S.), tân'tôn.
Taurus, tâ'rûs.
Tchad, châd.
Tchukchee, chôok'chêe'.
Tebu, tâ'by.
Tegucigalpa, tî-gî-se-gâ'l'pâ.
Tehama, tâ-hâ'mâ.
Teheran, tâ-hê-rân'.
Tehuantepec, tâ-wân-tâ-pêk'.
Temezeff, têm-êsh-vâz'.
Teneriffe, tên'gr-îf'.
Tengri Nor, tên'grê nôr.
Tennessee, tên'ê-ô'.
Terre Haute, têr'g hôt; Fr.
pron. têr'hôt, or têr'g hôt.
Tevere, tâ'vâ-râ.
Texaco, tês-kî'ko.
Thaba Bosiu, tâ-bî' bô's'ôo'.
Thames, têmes; thâmz, in Con-
necticut.
Thebes, thêbz.
Thells, thêls.
Thereseinstadt, têr-â-sê-în-
stât'.
Thermopylae, thêr-môp'î-lâ.
Thian Shan, tî-ân' shân.
Thibet, thî'bê't, or thî-bê't'.
Thibodeaux, thî'bô-dô'.
Thome, tî'mô.
Tiber, tî'bêr.
Ticonderoga, tî'kôn'dêr-ô'gâ.
Tidikeit, tî'dî-kêl't.
Tien-tsin, tî-ên'tsîng'.
Terra del Fuego, tê-ên'â dêl
fê'wâ'gô.
Tifli, tîf-lîs'.
Tigris, tî'grîs.
Tiabucton, tîm-bûk'tôô.
Timur, or Timor, tî-môor'.
Tintellust, tîn-têl'ôst'.
Titicaca, tî-tî-kâ'kâ.
Tivoli, tîv'ô-lî, or tî'vô-lî.
Tlaxcala, or Tlascala, tâks-kâ'lâ.
Tobol, tî-bôl'.
Tobolsk, tî-bôl'sk'.
Tocantins, tî-kân-tênz'.
Todos Santos, tî'dôse sântô'se.
Tokat, tî-kâ't'.
Tokay, tî-kâ't; Hung. pron.
tî-kol'.

Tô-kê-î', or Tokio, tî-kê-ô'.
Toledo, tî-lê-dô; Sp. pron.
tî-l'ôdô.
Tollima, tî-lî'mî.
Toluca, tî-lî'kâ.
Tombigbee, or Tombigby, tîm-
bîg'bî.
Topeka, tî-pê'kâ.
Tornea, tîr'nê-ô. Sometimes
written Torneo.
Toronto, tî-rôn'tô.
Torrens, tîr'gên.
Torres, tîr'ê.
Tortugas, tîr-tô'gûs.
Toulon, tîl'ôn'.
Toulouse, tîl'ôse'.
Tournai, tî'rân'.
Tournay, tîr-nâ'.
Tours, tîr'.
Towanda, tî-wôn'dâ.
Trafalgar, trâl'fâl-gâr'.
Transvaal, trânsvâl'.
Transylvania, trân-sîl-vâ-
nî-â.
Trav'ers.
Trebisond, trêb'î-sônd'.
Trieste, trî-êst', or trê-êst'.
Trinidad, trî'nî-dîd'.
Tripoli, trîp'ô-lî.
Trombetas, trôm-bê'tâs.
Trondhem, or Drontheim,
trônd'êm.
Troy, trôl'.
Trojes, trwâ.
Trojillo, or Truxillo, trî-
jîl'î-ô.
Tuaregs, tîr-â-rê'gâ.
Tubac, tîj-bâk'.
Tucson, tîok'sôn.
Tucuman, tîj-kî-mân'.
Tulare, tîl-â-râ'.
Tundra, tîdôn'drâ.
Tunis, tî'nîs'.
Tuolumne, tîl'ôm-ne.
Ty-rân'.
Turin, tî'rîn, or tî-rîn'.
Turkistan, tîr'kîs-tân'.
Turcaloon, tîr-kâ-lôo'gâ.
Tussey, tîs'îz.

U.

Ucalary, îj-kî-â'rê.
Ucayali, ôk-kî-â'lî.
Udine, îj-dîn'.
Udong, or Oodong, îj-dông'.
Udscol, or Oodskol, îj-dskol'.
Uintah, wî'n'tâ.
Uist, wîst.
Ujji, îj-jê-jê.
Ulm, îlm; Ger. pron. ôlm.
Ulster, îl'stêr in Ireland;
ôl'stêr in Germany.
Umatilla, îj-mâ-têl'î-â.
Umbagog, îm-bî'gôg.
Umpqua, împ'kwâ.
Unaka, îj-ôn'gâ.
Upernavik, îp'êr-nâ'vîk.
Upsala, îp'sâ-lâ.
Ural, îj'râl; Oural, îrâl'.
Urmia, or Urumiah, îr-mê'gâ,
or îr-rô-mê'gâ.
Uruguay, îj-ô'rôô-gwâ, or îr-
rô-gûl'.

Utah, îj-ô'tâ, less properly
îj-ô'tâ.
Utica, îj-ô'tî-kâ.
Utrecht, îj-ô'trêkt.

V.

Vaal, vâl.
Vaduz, vâ'dyts.
Valais, vâl'îs'.
Vaidin, vâl'dî.
Valdivia, vâl-dê'vî-â.
Valencia, vâ-lên'shî-g; Sp.
pron. vâ-lên'thê-â.
Valladolid, vâl-lâ-dô-lîd'; Sp.
pron. vâl-yâ-dô-lân'.
Vallejo, vâl-jê'hô, or vâl-lâ'hô.
Valparaiso, vâl-pâ-rî-ô.
Vancouver, vân-kôô'vêr.
Vanua Levu, vâ-nû'â lî'vî.
Varna, vâ'nâ.
Vaud, vô.
Vendée, vân'dê.
Vendome, vân'dôm'.
Venetia, vên'ê-shî-gâ.
Venezuela, vên'êz-wê'lî-g; Sp.
vên-êth-wî'lî.
Venice, vên'îs'.
Vera Cruz, vî'râ krôô.
Verd, or Verde, vêrd'.
Vêrdun, vêrdûn'.
Vermejo, vêr-mâ'jô.
Versailles, vêr-sâ'lê; Fr. pron.
vên-sâ'l', or vên-sâ'y'.
Vesuvius, vê-sô'vî-ûs'.
Viatica, vî-â'tî-kâ.
Vicksburg, vîks'bûrg.
Vienna, vî-ên'g, in Austria.
Villa Rica, vîl'î-â rî-kâ in Span.
Am.; vîl'î, or vê'lî rî-kâ.
Vincennes, vîn-sênz'; Fr. pron.
vân'sên'.
Vincent, vîn'sênt.
Vindhya, vînd'yâ.
Virginia, vîr-jî'nî-â.
Vistula, vîst'ô-lâ.
Vit' Levu, vî-tô lî'vî.
Vladimir, vîl-dô-mêr'.
Volga, vô'gâ.
Voges, vôsh.

W.

Wabash, wâ'bâsh.
Wachusett, wâ-châ'sê't.
Wadai, wâ'dî.
Wadi Draa, wâd'ê drâ.
Wâ-hî'bôô.
Wahatchi, wâ'hâch'.
Walachi, wâl-lâ'kâ-gâ.
Waldock, wâl'dôk'.
Walla Walla, wâl'lâ wâl'lâ.
Wars, wâ'râ.
Warsaw, wâr'sâ.
Warburg, wâr't-burg.
Washita, wôshî'tâ.
Watauga, wâ'tâ-gâ.
Wateree, wâ'têr-ê'.
Waukegan, wâ-kê'gân.
Weimar, wî'mâr.
Wellersley, wêl'z-lî.
Wesel, wê'sêl'.
Weser, wê'sêr; Ger. pron.
wî'zêr.
Wett'r, wê'têr.

Wetumpka, wê'tûmpkâ.
Weymouth, wê'mûth.
Whitcom, whî'tkôm.
Wichita, wîch'î-tâ.
Wicklów, wîk'lô.
Wieliczka, wê-lîch'î.
Wiesbaden, wê'sbâ'dên.
Wilkesbarre, wîks'bâr-î.
Willamette, wîl'â-mê't.
Willit-mâ'tê.
Winnebago, wî-nê-bâ'gô.
Winnipeg, wî'n-pêg.
Winnipisogow, wî-nî-pî-sô'g.
Winona, wî-nô'gâ.
Winooki, wî-noos'î.
Wisconsin, wîs-kôn'sîn.
Wolstenholme, wôl'stên-hôlm'.
Woonsocket, wî-nô-sôk'ê't.
Worcester, wô'stêr.
Wurtemberg, wûr'tên-bêrg;
Ger. pron. wûr'tên-bêrg'.
Wyandot, wî-ân-dô't.
Wyoming, wî-ô'mîng.

X.

Xenia, sên'î-gâ.
Xingu, shên-gû.
Xulla, xî'lâ.

Y.

Yablonoi, yâ-bîl'ô-nî.
Yakutsk, yâ-kôô'sk'.
Yankton, yâng'tôn.
Yangtsieki, g, yâng'tsê-kî.
Yanteles, yân-tâ-lê.
Yapura, yâ-pû'râ.
Yâr-kând'.
Yavari, yâ-vâ'rê, or Javay.
Yâ-soo'.
Yed'ô, or Jedo, yêd'ô.
Yenisei, yê-sê-sî-ê.
Yezo, yâ'ô.
Yo-kô-hâ-mâ, or yo-kô-hî-mâ.
Yoruba, yô-rô-bâ.
Yosemite, yô-sê-mî-tê.
Youghiogheny, yô-hô-gâ.
Ypsilanti, îp-sî-lân'tî.
Yreka, î-rê'kâ.
Yssel, î'sêl'.
Yu'ba.
Yu-râ-tân'.
Yu'kon.
Yu'mâ.
Yunnan, yû-nân'.
Yuthia, yû'tî-â.

Z.

Zacatecas, zâ'tê-tî-kâ.
Zaisan, zî-zân'.
Zambesi, or Zambèz, zâm-
bê-zê.
Zanguebar, zang-gê-bâr'.
Zante, zân'tê.
Zanzibar, zan-zî-lâr'.
Zava, zâ'râ.
Zaragoza, or Saragosa, zâ-sô-
gô-zâ.
Zaider Zee, or Zuyder Zee, zî-
dêr-zê.
Zulphion, zîl'phôn.
Zulu, zî'lî.
Zurich, zîr'îk.
Zutphen, zî'tphên.

â, ê, î, ô, û, as in môte, mîte, môte, mûte.
ô, as in dô; ô, as in dône; û, as in rîde like ô; û, as in push; ê, as in têrm; g, g, g, somewhat like û, as in fra'grant, Sa'lem, Hud'son.

â, ê, î, ô, û, as in ât, pêt, ît, nôt, up.

â, ê, î, ô, û, as in câre, thêre, fîrm, fôr, fûrl.

î, as in fîr; â, as in lâet; g, as in gâil;
th, as in thîn; ru, as in wîth; v, nearly like m.

